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FOOD STR..TEGIES IN THE ..FRIC..N LE..ST DEVELOPED COUNTRIES: AN ASSESSMENT

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I. INTRODUCTION AND BACKGROUND

1. Sub-Saharan Africa, of which African least developed countries are a part, has been described as "the only major region in the world where the rate of population growth is continuing to rise and where per capita food production has declined over the last 25 years" and the region is therefore facing a severe food crisis. 1/ This situation continues to affect the African least developed countries inspite of the fact that "since 1979 groupings primarily composed of African LDCs such as OAU, ECA, SADDC, CILSS have given increased attention since 1980 to domestic food security, agricultural production and rural development largely along lines indicated in the SNPA". 2/

2. That the African LDCs have a food self-sufficiency problem to tackle, there is no disagreement. The Ministers of Planning and Economic Development of African LDCs in a recent memorandum reiterated their "commitment to the Substantial New Programme of Action (SNPA) food strategies which aim at greater food self-sufficiency and the elimination of hunger and malnutrition in the least developed countries by the year 1990". 3/

3. This study, which is part of indepth studies on the economies of African least developed countries envisaged in the ECA Medium-term Plan for the period 1984-1989, underscores the objective of the attainment of food self-sufficiency as a priority area called for in such key documents as Freetown Declaration (November 1976) of Ministers of Agriculture, the Regional Food Plan for Africa (1978), the Monrovia Declaration of Commitment on Guidelines and Measures for National and Collective self-reliance in social and Economic Development for the Establishment of a New Economic Order (July 1979), the Lagos Plan of Action (1980), and the Substantial New Programme of Action (1981) incorporating the Programme of Action adopted by the World Conference of Agrarian Reform and Rural Development (WCARRD - 1979).

1/ Agricultural Policy and its relationship to food policy in Sub-Saharan Africa: Economic Development Institute of the World Bank, May 1985, p. 029.

2/ UNCTAD: Mid-term Global Review of Progress Towards the Implementation of the Substantial New Programme of Action (SNPA) for the 1980s for the LDCs, July 1985.

3/ Memorandum by the Conference of Ministers of African least developed countries on the Mid-term Global Review of the Implementation of the SNPA in Africa, April 1985.

4. As pronounced in the Harare Declaration on the Food Crisis, all the African Governments affirmed that the burden of developing agriculture and rural areas and raising the national standards of their peoples rests substantially on the efforts of their own governments and peoples. This is self-reliance spirit that should be the basis of African economic and social development. But even more basic may be the extent to which the existence of the problem of food self-sufficiency is appreciated by the farmers themselves and how that recognition could be used as a motivating force to stimulate further production in order to achieve not only food self-sufficiency but also food security.

5. In as much as not all African LDCs are endowed with food production potential, comparative advantage, for the purpose of this study, is not considered a viable basis for formulating a food strategy. On the contrary, a country such as Djibouti having only around 200 hectares of arable land could be a net importer of food and still have a food strategy on how to meet food self-sufficiency objective for its people by merely pursuing other activities that will bring in foreign exchange earnings with which to buy food.

6. It is an assumption in this study that a food production-oriented strategy should have influence on food producers, marketing agents and food consumers and furthermore that in such a situation other subsumed objectives such as those of improved nutrition, more rapid growth in domestic food production and food security against famine would be met automatically.

7. Inspite of lack of surveys of soils in many African LDCs, it is common knowledge that there is generally no uniformity of climate or ecology even within the geographical confines of one country. However, on the assumption that ecological zones fall within very narrow geographical limits, we have, for comparative purposes, followed FAO's ecological subregions, which include: (A) West Africa: Benin, Guinea, Guinea-Bissau, Sierra Leone and Togo; (B) Central Africa: Central African Republic, Equatorial Guinea and Sao Tome and Principé; (C) Eastern and Southern Africa: Botswana, Burundi, Comoros, Djibouti, Ethiopia, Lesotho, Malawi, Rwanda, Somalia, United Republic of Tanzania and Uganda; (D) Sahel: Cape Verde, Chad, Mali, Niger and Burkina-Faso; and (E) North Africa: Sudan.

8. The limitation of this study, however, is the paucity of information owing to the unspecific manner in which available information is given on such topics as expansion of acreage of cultivable land, structural solutions of land tenure, use of appropriate farming tools, fertilizers, improved varieties of seeds, dissemination of research findings, training, development of physical infrastructure, reduction of post-harvest losses, improvement of rural credit, marketing, extension services etc. Furthermore, information from country development plans, which otherwise would have been useful, is not up-to-date for some countries while for others it is even not available. 4/

9. The study is divided into four main sections: Section I deals with introduction and background followed by Section II and III respectively dealing with an assessment of food production discussed in terms of its availability to satisfy nutritional requirements within economies beset by unique economic vulnerabilities; and food strategies and general agricultural development policies which are reviewed against a setting of (a) past agricultural development policies, (b) national food strategies in respect of the Regional Food Plan for Africa, the Lagos Plan of Action and the Substantial New Programme of Action and (c) Production potentialities. The final Section IV is on summary and recommendations.

II. ASSESSMENT OF FOOD PRODUCTION IN THE AFRICAN LDCs

10. Agriculture is the most important single sector in all the African LDCs on average accounting for around 36 per cent of their GDP (see Annex I). In 1982 this proportion varied widely. For example, 72 per cent for Uganda and between 43 and 54 per cent for Benin, Burundi, Chad, Ethiopia, Guinea-Bissau, Niger, Somalia and United Republic of Tanzania, 12 per cent for Botswana and as low as 6 per cent for Djibouti where out of arable land area of 0.23 per cent of total only 200 hectares are under cultivation. 5/

4/ The picture within ECA of the most up-to-date country Development Plans as of 30 October 1985 was as follows: Benin (None); Botswana (1979-1985); Burkina-Faso (1972-1976); Burundi (1968-1972); Cape Verde (1959); Central African Republic (1980-1981); Chad (1971-1980); Comoros (None); Djibouti (None); Equatorial Guinea (None); Ethiopia (1968-1973); Gambia (1981/82-1985/86); Guinea (1964-1971); Guinea-Bissau (1967); Lesotho (1975/76-1979/80); Malawi (1971-1980); Mali (1974-1978); Niger (1979-1983); Rwanda (1981-1990); Sao Tome and Principé (None); Sierra Leone (1974/75-1978/79); Somalia (1974-1978); Sudan (1977/78-1982/83); Togo (1976-1980); Uganda (1977/78-1979/80) and United Republic of Tanzania (1974).

5/ UNCTAD: The Least Developed Countries 1984 Report.

11. Except Sao Tome and Principé and Djibouti for which data are not available, 76 per cent of the economically active population in the other African LDCs are engaged in the agricultural sector, which underlines its dominant role in the overall development of these countries.

12. Whereas (see Annex I) the majority of the African LDCs (fifteen) have populations of under five million - small enough to be regarded as a misfortune in disguise as they do not represent markets large enough to attract investment - their growth rates weighed against food production and its availability should be of concern for some of the countries if health and nutrition standards are not to become a serious impediment to their socio-economic development as cautioned in Paras 44-46 of the SNPA.

13. The distribution of populations below 5 million with growth rates per annum indicated in brackets for each country in the period 1980-1985, is as follows: Benin (2.8), Botswana (3.4), Burundi (2.6), Cape Verde (1.4), Central African Republic (2.3), Chad (2.3), Comoros (3.0), Djibouti (3.2), Equatorial Guinea (2.1), Gambia (1.9), Guinea-Bissau (1.9), Lesotho (2.4), Sao Tome and Principé (2.7), Sierra Leone (1.7) and Togo (2.5).

14. The distribution of population in the remaining countries is as follows: 6-10 million people: Malawi (3.2), Mali (2.7), Niger (2.8), Rwanda (3.4) and Somalia (3.5); 11-15 million people: Uganda (3.5); 16-20 million people: Sudan (3.3); and over 21 million people: Ethiopia (2.6). 6/

15. In general, good performance of both the export and food sectors in the African LDCs during the 1960s has given way to anxiety for the future. The problem of food shortage in particular coincided in the 1970s with the slow-down in the rates of growth of real output in the developing countries, which adversely affected African exports by high rates of inflation and unemployment, by rises in the prices of

6/ United Nations: World Population Prospects: Estimates and Projections as assessed in 1982, New York, 1985.

crude oil and imported capital and consumer goods including food by a substantial deterioration in terms of trade, by slow growth of agricultural and food production, by large fluctuations in export commodity prices and by a massive increase in liquidity both domestic and international, which led to instability in world and domestic capital markets. 1/

16. The problem of food shortage for the African LDCs was intensified and precipitated in the early 1980s by the most devastating drought in living memory which wreaked havoc in food and livestock production in 20 of these countries. The land-lockedness of some LDCs (e.g. Burkina-Faso, Niger, Mali, Chad, Central African Republic, Burundi, Rwanda, Uganda, Botswana, Malawi and Lesotho) give nightmares of desperation to people living in them. The land routes to the coast are long and make the transportation of the bulky farm inputs such as fertilisers, farm equipment and spare parts etc. very expensive indeed.

17. The worsening of the food and agriculture situation in recent years led to the adoption of the Harare Declaration on the Food Crisis in Africa (25 July 1984) by the 13th FAO Regional Conference for Africa and it is against this background that an assessment of food production situation in the African LDCs is taken up below.

(a) Food production

18. Among the main food crops grown in either some of or all the five FAO's ecological subregions embracing the 26 African LDCs are maize, millet, sorghum, rice, pulses, root crops (cassava, sweet potatoes, yams and potatoes), groundnuts and bananas. The importance of each crop (in terms of calorie intake proportions) and the quantities produced vary from country to country depending on the agricultural production potential as well as production strategies and policies pursued in each country. Figures of nominal fish catches and of slaughterings available for each African LDC are useful and are indicative of fish and livestock as means of providing additional sources of food.

1/ ECA: Survey of Economic and Social Conditions in Africa, 1979-1980, Part I, E/CN.14/802, April 1981.

19. Table 1 below is indicative of the significance of some selected food items in the diets of the people in sixteen African LDCs.

Table 1: Main percentage share of calorie intake for selected crops and countries (1983-1985)

	Coarse grains	Rice	Root crops	Pulses	Meat/milk	Wheat
Botswana	39	-	-	8	15	11
Burkina-Faso	63a/	3	-	-	-	2
Burundi	24b/	1	35	17	-	21
Cape Verde	44c/	4	7	5	-	4
Chad	53a/	3	-	-	-	2
Ethiopia	59	-	-	8	-	12
The Gambia	20	39	-	-	-	2
Guinea-Bissau	11	43	8	-	-	2
Lesotho	54d/	-	-	-	-	23
Mali	60e/	10	-	-	-	2
Niger	67a/	5	4	11	-	-
Rwanda	10b/	-	42	17	-	-
Sao Tome and Principé	14c/	6	16	21f/	-	16
Somalia	32g/	9	-	-	27	10
Sudan	43a/	-	2	2	-	8
Tanzania	26h/	5	32	-	-	3

Source: FAO: Situation Report No. 8 on Relief and Rehabilitation in food and agriculture of African countries affected by calamities in 1983-1985, Rome, end June 1985, pp.3-36.

a/ millet/sorghum b/ sorghum/maize c/ maize d/ sorghum 12% and maize 42%
e/ millet/sorghum/maize f/ pulses/nuts g/ millet/sorghum 15% and maize 17%
h/ millet/sorghum 4% and maize 22%.

(A) West Africa

(Benin, Guinea, Guinea-Bissau, Sierra Leone, Togo)

20. Examined more closely, however, per capita food production peaks attained in the 1970s in all the countries of the subregion declined considerably especially during the 1980s reflecting partly repeated adverse climatic conditions and partly inadequate investment in the food production sector. This declining pattern of per capital food production was particularly true in respect of cereals and roots and tubers but not in the production of pulses and meat (see Annexes II-V). In Benin per capita food production in 1984 registered a decline of 8 per cent from a high peak of 111 per cent in 1979.

21. In Sierra Leone and Togo in 1984 the drops of per capita food production were by 13 and 15 per cent respectively from high peaks of 102 and 104 per cent in 1978. In general, the growth rate of per capita food production in each of the five countries of the West African ecological subregion was negative and therefore incapable of meeting food needs without resort to imports for the populations with average growth rates of over 2 per cent (see Annex I).

22. Everywhere in the subregion the increase in the production of primary coarse grains (maize, sorghum, millet - excluding rice and wheat) in the past tended to vary with the rise and fall of acreage under crop and, except in Sierra Leone where yields are double those in Benin, Guinea and Guinea-Bissau, productivity of cereals in the latter three countries in general leaves much to be desired if the achievements in Sierra Leone could be used as an indicator of production possibilities (see Annex VI).

23. Rice is the most important single grain accounting for the highest proportion of calorie intake in Sierra Leone, Guinea and Guinea-Bissau in that order. Its production in these countries somehow stagnated in recent years while the highest yields of 2,067 kgs per hectare ever attained (1977) in Benin dropped by 41 per cent to 1,204 kg in 1984 (see Annex VII).

24. Self-sufficiency ratio in cereals was estimated at 74 per cent for Benin in 1982 compared to 83 per cent each for Guinea, Sierra Leone and Togo and 69 per cent for Guinea-Bissau and although relatively high these levels need raising further.

25. Although once a net exporter of rice, Sierra Leone turned into a net importer in 1982 when it spent 36 per cent of export earnings to import rice. Swamp rice development has been one of the major (UNDP/F.O) agricultural projects (1984).

However, the constraints to overall agricultural development there stem from insufficient transport infrastructure, deficiencies in organization, price policies and the concentration of production on small farms employing traditional methods of shifting cultivation. Inputs used in agricultural production are generally exempted from duty and taxes. In 1983 producer prices were raised by 63 per cent in order to stimulate farmers' efforts to increase rice production. Nevertheless, the need for more detailed research into methods and problems of improving production of rice, sorghum, yams, sweet potatoes and plantains is now considered significant. 8/

26. In Guinea, growth production targets set by the Government are said to be lower than in the SMPA while transport infrastructure continues to aggravate post-harvest losses. In Benin, priority is given to food production and in the 1983-1987 development programme rural development will receive 23 per cent of the total financing in order to improve productivity and to extend the area of arable land.

27. In Guinea-Bissau, on the other hand, the value of imports is greater than total export earnings because the monetized sector of the national economy is limited. Rice and groundnuts are the main crops there but food aid remains an important component of total food consumption.

28. Past government development strategy in Togo was aimed at achieving food self-sufficiency by 1985 as well as a surplus for the development of a food processing industry but recent events have intervened with Government plans and the poor rainfall in 1982, continuing into 1983, necessitated food aid during 1984/1985.

29. Nominal fish catches in Togo and Guinea stagnated in recent years while the fisheries sector in Guinea-Bissau made considerable progress (see Annex VIII). In Sierra Leone fish catches were in 1982 and 1983 recorded at 22 per cent below their highest level of around 68,600 metric tons in 1975. On the other hand, total meat production was generally on the increase in everyone of these countries during the period 1974 - 1984. For example, the increase in Guinea-Bissau was by as much as 90 per cent, in Guinea 58, in Sierra Leone 42, in Benin 37 and in Togo 27 per cent.

8/ UNDP: Report on Development Co-operation for 1984, p. 7.

(B) Central Africa

(Central African Republic, Equatorial Guinea, Sao Tome and Principé)

30. Indices of total food production indicate that the trend in the Central African Republic was generally upwards rising from 100 in 1974 to 113 in 1984. The situation, however, was quite the opposite in Sao Tome and Principé where total food production declined from a high of 115 in 1974 to 83 points in 1983 rising again to only 97 points in 1984.

31. Food production per caput in the Central African Republic tended to decline signifying an increase in population. An equally interesting observation is that additional increase in output was linked to an increase in acreage harvested. This was generally true in the case of millet and maize in which areas sown increased by 43 per cent between 1977 and 1984 for millet and by 20 per cent between 1977 and 1982 for maize. Increasing food production to achieve self-sufficiency is one of the Government's priorities under the 1983-1985 three-year development programme. Besides its acute lack of financial resources (both domestic and foreign), the Republic is a vast land-locked country which makes the creation and maintenance of basic economic and social infrastructure very expensive.

32. Per capita production of roots and tubers remained somewhat stagnant in Sao Tome and Principé in the period 1974-1984 while their production trend in the Central African Republic was clearly downward in the same period as was also the case in pulses production and only in total vegetable production was performance impressive in 1984 having registered 127 per cent compared to its level of 98 points in 1974.

33. The agricultural sector in Equatorial Guinea represented 38 per cent share in total GDP in 1982 and 74 per cent of the total country's population of around 370,000 was engaged in agriculture. The paucity of statistical data, however, prevents a meaningful analysis of the food situation there. According to Resident Co-ordinator's report in May 1984, agriculture and infrastructure were the main priorities in the three-year Reconstruction Programme (1982-1984) intended to create favourable conditions for raising food and cash crops production and for increasing exports and to rebuild the public administration and social institutions to support the country's reconstruction.

34. Sao Tome and Principé has a mono crop economy based on cocoa. Rain is said to be less predicatable and abundant and as such the country imports almost all its food requirements. Cereals self-sufficiency ratio was estimated at 9 per cent in 1982 and food production per caput has since 1977 remained below its highest average level of 1974-1976. In fact, in 1983 the drop was by as much as 45 per cent (from 117 points in 1974). The bold objective of the Government is said to be to reduce dependency on imported foodstuffs through the extension of area under cultivation together with improvement of agricultural methods. Exports planned, besides cocoa, include coffee, copra, chillies, bananas, flowers and fish.

35. Nominal fish catches in the Central African Republic remained stationary in the period from 1977 up to the present while in Equatorial Guinea catches started a decline in 1980 from a high of 4,000 metric tons in 1979 from which there has not been recovery since. In Sao Tome and Principé, however, there has been a recovery since 1981 with catches reaching 4,000 metric tons in 1984 compared to 1,175 in 1978 and 475 in 1979 (see Annex XIV). The efforts made by the Government in this connection, with the support of the international community, are therefore commendable.

36. Total meat production in the Central African Republic reached 123 points in 1984 compared to 98 in 1974. Sao Tome and Principé reached the highest peak ever 117 points in 1976 declining to 70 points in both 1978 and 1979 and averaged around 100 points each year between 1982 and 1984 (see Annex XV).

(c) Eastern and Southern Africa

(Botswana, Burundi, Comoros, Djibouti, Ethiopia, Lesotho, Malawi, Rwanda, Somalia, United Republic of Tanzania and Uganda)

37. Growth rates for the production of cereals (read in brackets) were considerably above those of population in Burundi (4.17), Ethiopia (3.0), Rwanda (3.9), Somalia (3.6) and Tanzania (11.2) in the period 1971-1980. This was also true of roots and tubers in Ethiopia (5.1), Rwanda (7.6) and the United Republic of Tanzania (7.0) in the same period. 2/ However, food production per caput either fluctuated as in Ethiopia or declined as in Botswana and Lesotho during the period 1974-1984. Only in Ethiopia and Rwanda was there improvement in production per caput of roots and tubers in 1983 respectively registering 18 and 30 points above their levels in 1974.

2/ FAO: Statistical Basebook on African countries affected by emergencies, May 1985, p. 61.

In Lesotho, Malawi and Uganda production of these items stagnated in the period 1974-1984 while there was a marked consistent decline of them in Burundi, Comoros, Somalia and United Republic of Tanzania during the same period.

38. Cereals production per caput improved significantly in the 1980s compared with the 1970s and therefore accounted for the overall improvement in food production especially in Burundi, Comoros, Malawi, Rwanda, Somalia and the United Republic of Tanzania and Uganda but its increased production during the period 1974-1984 depended on the increase in acreage harvested rather than on the improvement in productivity. Incidentally, acreage under maize in Botswana was reduced considerably in 1984 by around 78 per cent below its level in 1974 compared to 44 per cent in Lesotho in the same period. Maize yields per hectare in the subregion are highest in Ethiopia even though in a normal year (1982) they were only about 35 per cent of yields for example in Reunion, or 72 per cent of yields in Mauritius thus signifying production possibilities yet to be achieved. Sorghum is equally important in Burundi, Ethiopia, Malawi, Rwanda, Somalia, the United Republic of Tanzania and Uganda but, as in the case of maize, acreage under sorghum in Botswana and Uganda has been reduced considerably in recent years although its reduction in the latter country has been compensated for by some of the highest yields obtained per hectare compared to Botswana's lowest in the entire ecological subregion. Cereals production in a normal year amount to around 50,000 tons compared to cereals imports of 130,000 tons in a normal year. Conditions in Botswana were worsening in the fourth (1985) consecutive drought year and the national cattle herd was anticipated to drop to an all time low of 2 million heads by the end of September 1985 against 3 million heads in 1982. 10/

39. Millet is important only in Burundi, Ethiopia, United Republic of Tanzania and Uganda. While its production is little in Rwanda and Botswana, its production pattern in the latter country has been in line with that of maize and sorghum while total output in the other five countries either increased or decreased in rythm with the increase or decrease in land area harvested and recorded yields per hectare are generally well below 1,000 kgs compared with 1,600 kgs and above in Uganda - the only country in the subregion with yields above 1,000 kgs per hectare. However, 1,600 kgs is far from the limit. For example, in the Sudan in 1984 a new sorghum hybrid, tolerant of a broad range of soils, pests and climate, produced 4,000 kgs per hectare in fields so dry that local varieties failed completely. 11/

10/ United Nations Office for Emergency Operations in Africa, June 1985.

11/ AID: Horizons: Spring 1985, p. 32.

40. The quantity of rice (paddy) produced in the subregion is statistically significant only in the United Republic of Tanzania and Malawi. Eventhough yields per hectare in Burundi are some of the highest in the subregion and are over three times of what they are in the United Republic of Tanzania, yet rice production in large quantity is limited by the availability of land suitable for the crop, which is also true in Rwanda. On the other hand, rice production in Malawi has remained more or less the same over the years with no change upward or downward in acreage sown.

41. But if cereals self-sufficiency ratio is any guide then an average of 90 per cent each estimated for Burundi, Rwanda, Ethiopia, Malawi, United Republic of Tanzania and Uganda in 1982 must be considered a lot of achievement towards food and nutrition. Nevertheless, other countries have still a long way to go in order to reach 100 per cent. To do so, a lot will depend on Government policy and strategy. For example in Botswana where cereals self-sufficiency ratio was estimated at 25 per cent in 1982, in Lesotho at 53 and in Somalia at 49. 12/ In Botswana the Government's programme of assistance to small farmers is intended to assist them to produce more food and to increase cattle production. In the Comoros, according to the 1983-1986 Interim Plan, the strategy, among others, aims at gradual reduction of imports of food and soil conservation.

42. Production of both pulses and vegetables in recent years has been good everywhere in the eastern and southern Africa subregion with the exception of Botswana, Burundi and Lesotho where production of pulses continued to decline as was also production of vegetables in Botswana.

43. The numbers of cattle, sheep and goats in the Sudan are said to have increased by 162, 127 and 100 per cent respectively while increases were also large in Burkina-Faso, Mali and Somalia during 1961-1980. 13/ Total meat production was low particularly in Botswana and Burundi whereas there was continued improvement everywhere else in the subregion during the period 1974-1984.

44. The high levels of nominal fish catches of the 1970s fell during the past five years in Burundi, Malawi and Uganda while they registered considerable increases in Somalia. So also increases have been notable in the United Republic of Tanzania

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12/ UNCTAD: The Least Developed Countries 1984 Report.

13/ FAO Statistical Basebook on African Countries Affected by Emergencies, May 1985.

since 1980 with the exception of a drop in 1982. There has been a general upward trend of nominal fish catches in Ethiopia since 1977 but a production of 3,900 metric tons in 1983 represented a drop of 33 per cent back to the 1974 level. The Government of Socialist Ethiopia has long aspired to develop the fisheries sector so that it can contribute to the foreign exchange earnings along with the livestock industry. Generally, however, the problems of replacing open fishing boats with motorized boats and modern fishing gear; establishing repair shops as well as constructing fishing harbours with the necessary freezing equipment seem to be common to many of the countries in the subregion.

(D) Sahel

(Burkina-Faso, Cape Verde, Chad, Gambia, Mali, Niger)

45. Except in the production season in Burkina-Faso, Mali and Niger in 1980-1981 and in Gambia in 1981-1982 when the highest real growth rates of food production reached far above population growth rates, food production in these countries has otherwise had a checkered history of either zero or negative growth (see Annex XXIII). Cereals production has definitely been on the decline in Chad during the 1980s while production increases and decreases elsewhere in the Sahel subregion tended to be governed by changes in acreage harvested. Moreover, yields per hectare - about 50 per cent of what they are, for example, in Sierra Leone - leave much to be desired.

46. Productivity in rice, on the other hand, is reasonably high in Burkina-Faso, Mali and Niger. Acreage down has remained constant in Niger while it has been scaled down in Gambia from 28,000 hectares in 1981 to 16,000 in 1983 and in Mali from 197,000 hectares in 1978 to 130,000 in 1983 and has also been on the decline in Burkina-Faso from 45,000 hectares in 1976 to 19,000 in 1983.

47. Production of roots and tubers per year in Gambia and Burkina-Faso remained at the same level throughout the early 1980s. However, production in Chad increased vigorously from 131 per cent in 1980 to 153 per cent in 1983 dropping to 133 in 1984 and in Mali decreased from 179 per cent in 1980 to 100 in 1984.

48. Production of vegetables in Burkina-Faso increased from 123 per cent in 1980 to 145 per cent in 1983 only to drop to 135 per cent in 1984. Production remained stagnant in Cape Verde but increased in Chad from 101 per cent in 1976 to 169 in 1983 dropping to 155 per cent in 1984. Production also increased respectively from 100 per cent in 1975 to 229 per cent in Mali in 1983 and from 97 per cent in 1977 to 156 per cent in Niger in 1984.

49. Burkina-Faso, Chad, Mali and Niger are livestock rearing countries usually supplying meat to the coastal-bound countries of Western Africa. Total meat production in Burkina-Faso, Mali and Niger did not increase as desired in recent years because of prolonged drought conditions. In fact, production in Chad declined from 124 per cent in 1980 to 95 per cent in 1984 (see Annex XXVII). Production of meat in Cape Verde, on the other hand, stagnated while some progress was, however, made in the fishing activity in which nominal catches in Cape Verde rose from around 800 metric tons in 1980 to 13,000 in 1983 whereas in Gambia catches tended to decline since 1981 reflecting the problem of management and absence of improved methods of handling. 14/ Fish catches in Chad in the 1970s remained at around the same level of 110,000 metric tons reaching 115,000 metric tons in the 1980s. Catches continued to decline each year in both Mali and Niger in the early 1980s (see Annex XXVIII).

(E) North Africa

(Sudan)

50. The real growth rate of food production in the Sudan in the period 1970-1980 was estimated at 2.6 per cent compared with a population growth rate of 3.1 per cent. However, total food production improved considerably during 1980-1981 when the real growth rate reached 16.5 per cent compared with a real growth rate of food production per capita of 13.2 per cent and a population growth rate of 3.3 per cent (see Annex I).

51. Inspite of the general upward trend in acreage sown, production of primary coarse grains (maize, millet and sorghum) in the Sudan tended to decline during the early 1980s compared with a somewhat upward production in the 1970s. It would, however, be simplistic to attribute this trend to bad weather conditions of the early 1980s. Somehow, yields of primary coarse grains per acre tended to decline, for example, from 501 kgs per hectare in 1982 to 37 kgs in 1984 while acreage in this period increased by 18,000 hectares. The decline in yields may have been

14/ Gambia: Country Presentation, Country Review Meetings 1981.

influenced by a reduction in the use of production requisites e.g. fertilizers and insecticides whose reduced importation started in 1977 owing to a shortage of foreign exchange and diversion of resources into new projects. 15/

52. Rice production, on the other hand, showed an upward trend in terms of productivity but the acreage under this crop (around 4,000 hectares) is at present about half of what it used to be between 1976 and 1978 (see Annex XXIX).

53. Although at a slightly higher level than in the latter part of the 1970s, production of roots and tubers in the Sudan stagnated throughout the early 1980s with production per caput indicating a drop of 23 per cent on average below 111 per cent in 1975. In the same vein, total production of pulses, although standing at a higher level than in the 1970s, remained unchanging in the early 1980s and a similar pattern was also recorded for vegetable production.

54. Total meat production in the Sudan registered a steady improvement having risen by 29 per cent in 1984 from its average level of 100 per cent in the period 1974-1976, which was actually in keeping with the increases in numbers of livestock (cattle, sheep, goats and camels). Although mainly carried out by nomadic pastoralists, livestock farming on modern lines in the Sudan is said to have recently begun to attract investment as well as integrating livestock in crop production schemes. In order to develop this industry fully with a possibility of increasing export surplus of the industry further, it is the intention of the Government to take measures that will reduce animal morbidity and mortality by controlling animal diseases and improving pasture and watering conditions.

55. Except for a drop to almost 33,500 metric tons recorded in 1977 compared to 24,700 metric tons the previous year and again in 1980, nominal catches of fish have generally kept an upward trend in the Sudan.

(b) Food supply and nutrition situation

56. As has been observed under Section II(a) above, food production differs greatly from country to country. As was also vividly brought out in an earlier ECA study on regional evaluation of the implementation of SMPA, there was a rapid decline in the overall growth of food production in the African LDCs in the period 1980-1984 in which annual growth rate declined from 5.9 per cent in 1980-1981 to 2.9 and 0.1 per cent in 1981-1982 and 1982-1983 respectively and the relatively good

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15/ FAO: Towards alleviation of rural poverty in the Sudan, July 1983, p. 45.

performance in food production in only a few countries (Botswana 13.5 per cent, Burundi 8.3 per cent in 1981 and the Gambia 25.5 per cent, Mali 8.3 per cent in 1981, Sudan 16.5 per cent in 1981 and Uganda 4.7 per cent) was due to high annual growth rates. Otherwise per caput food production in the African LDCs has been on the decline since the 1970s. 16/ In fact, in the period 1981-1984 only in Botswana, Malawi, Rwanda and the United Republic of Tanzania did food production grow at a faster rate than that of demand.

57. As a consequence of this food production pattern, per caput daily supplies of calories and protein have been reduced to undesirable nutritional levels (see Table 2 below). Countries reflecting the declining situation in 1970, 1980 and 1982 in respect of per caput calories per day emanating from cereals were: Burkina-Faso, Chad, Mali and Ethiopia - countries which are still experiencing food difficulties. Per caput protein supply per day has also been on the decline in Burkina-Faso, Chad, Mali and Somalia.

Table 2: Major staple food, per caput daily supply in terms of calories and in terms of protein - 1970, 1980 and 1982

Country	Major staple food	Per caput calories per day			Per caput protein supply per day (grams)		
		1970	1980	1982	1970	1980	1982
Burkina-Faso	cereals	2,008	1,884	1,879	66	61	59
Cape Verde	cereals	1,953	2,716	2,761	50	68	67
Chad	cereals	2,178	1,817	1,722	70	58	55
Mali	cereals	2,101	1,785	1,722	59	50	51
Niger	cereals	2,083	2,422	2,455	58	71	73
Burundi	roots, tubers	2,200	2,259	2,374	59	62	64
Ethiopia	cereals	2,050	2,359	2,162	71	74	73
Rwanda	roots, tubers	2,089	2,018	2,206	56	50	54
Somalia	cereals	2,173	2,001	2,099	76	64	65
Sudan	cereals	2,135	2,367	2,249	65	66	63
Tanzania	cereals	2,039	2,358	2,491	46	50	51
Botswana	cereals	2,151	2,491	2,445	74	78	77
Lesotho	cereals	2,026	2,425	2,285	61	72	69

Source: FAO Statistical Basebook on African Countries Affected by Emergencies, May 1985.

16/ ECA: Regional evaluation and assessment of the implementation of the SNPA in the African LDCs, 1981-1984, February 1985.

58. Statistics of nutrition from animal products indicate that there was improvement in intake of both calories and proteins on average in 1979-1981 over 1970 in Cape Verde, Burundi, Rwanda, Sudan and Lesotho. Elsewhere in the African LDCs intakes of calories and proteins either stagnated or declined. Nutrition from fish food showed improvement only in Cape Verde and a decline in Chad, Mali, Burundi and Tanzania - the only countries with nutrition data available. 17/

59. As a result of observed decline in domestic food production, food imports particularly of cereals (coarse grains, wheat and rice) have been on the increase in nearly all African LDCs and might continue in future unless drastic measures are put in motion to reverse the trend. This upward tendency of cereals imports was true in the years 1976/1977 - 1978/1979 (average), 1983/1984 and 1984/1985 (estimate) for Burkina-Faso, Chad, Mali, Ethiopia, Rwanda, Sudan, Tanzania and Botswana (see table 3 below).

Table 3: Cereals imports (commercial and food aid) in twelve countries in selected years ('000 tons)

	Actual imports						Estimated import requirements		
	1976/77-1978/79 average 18/			1983/1984 19/			1984/1985 19/		
Country	Total imports	Commercial imports	Food aid	Total imports	Commercial imports	Food aid	Total imports	Commercial imports	Food aid
Burkina-Faso	68	28	40	163	60	103	300	115	185
Cape Verde	58	24	34	90	15	75	65	5	60
Chad	48	13	35	127	50	77	330	50	280
Mali	76	58	18	292	133	159	550	175	375
Niger	59	29	30	31	11	20	520	125	395
Ethiopia	227	122	105	511	53	458	1,700	200	1,500
Rwanda	14	2	12	27	13	14	60	18	42
Somalia	162	82	80	297	64	233	250	55	195
Sudan	137	51	86	402	28	374	1,500	100	1,400
Tanzania	142	45	97	355	174	181	450	236	214
Botswana	90	83	7	189	152	37	200	153	47
Lesotho	126	102	24	187	141	46	180	106	74

Source: Commodities and Trade Division, FAO.

Note: Figures have been rounded to the nearest digit.

17/ FAO Statistical Basebook on African countries affected by emergencies, May 1985.
18/ July-June basis. 19/ Marketing year basis.

60. Commercial cereals imports in 1983/84 increased in Chad, Mali, Rwanda and United Republic of Tanzania by more than double their average levels in 1976/77-1978/79 reaching record peaks in all the countries in 1984/85 except Cape Verde and Somalia. It needs pointing out, however, that commercial food imports on a large scale are not without adverse effects on development programmes of the African LDCs because funds originally earmarked for other projects tend to be diverted in order to solve a food emergency situation.

61. Food aid in the African LDCs is directed at solving the food needs of different vulnerable groups such as displaced groups of people as a result of drought (Ethiopia, Somalia), earthquake victims (Guinea), returnees, refugees (both urban and rural) as in Burundi, Central African Republic, Djibouti, Lesotho, Rwanda, Somalia and Sudan. Some food aid is also destined for use by malnourished children through special feeding programmes (e.g. in Benin, Cape Verde, Burkina-Faso, Botswana) and also for supplementary feeding programmes for schools and vulnerable groups. 20/ Sometimes food aid is used for price control, food for work and/or subsidies to hold down retail prices of basic foods. However, it should never be allowed to get consumers hooked on it permanently to the point of people not going back to their traditional foods or even of discouraging local food production.

62. Whereas drought exacted a great physical toll on human, plant and animal life and also in many countries seriously disrupted the flow of raw materials to agro-based industries and in that way reducing output and employment, it would be naive, however, to suggest that food situation in the African LDCs suddenly assumed a decline because of the drought. In fact, in order to fully appreciate the situation we need to evaluate past programmes of production; the extent of the effective application of appropriate technology; the extent of support to agriculture; expansion of arable land; improvement in the productivity of land through fertilizer use and development of irrigated agriculture. Not less in importance, one would also have to evaluate rural institutions (e.g. agrarian reform, agricultural credit and extension etc.) as means of mobilizing farmers for action. By allocating a greater percentage of the public expenditure to agriculture than the other developing countries, some African countries may have demonstrated a new commitment to agricultural production. 21/ It seems, however, that there is a need to increase such public expenditure to levels that will have impact on food and agricultural

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20/ Situational Data on food aid, October 1984.

21/ FAO: Contribution, assessment of agricultural and rural development sectors, p. 8, para. 19.

production. The World Food Council recently noted that there exists a definite commitment on the part of African LDCs to step up or revitalize agricultural production more particularly the production of food even though this commitment has not always been matched by deeds even in countries which have launched national food strategies.22/

63. The African LDCs cannot indefinitely depend on food imports in order to sustain their rapidly increasing rural population. Whereas new technology gives further push to farmer credit needs e.g. chemical fertilizers instead of manures, tractors (and fuel) in place of animal power, pesticides and herbicides instead of handwork and new seeds instead of carry-over from the previous year's crop, investment in it must be recognized as vital. It is in fact investment in appropriate technology in the other parts of the world that has caused the decline in the real prices of many agricultural commodities in international trade in which only low cost producers benefit.

64. The introduction of new technology by itself, however, will be of no consequence. It will need a backing from the organisation of other agricultural services such as research, extension, credit, marketing including prices paid to producers of both food and export products, etc. Only then will the African LDCs be in a position to have a surplus beyond current food requirements and therefore begin to build up national and subregional stocks of food and thus ensure food security as called for in para. 99 of the SNPA.

(c) Economic vulnerability of the African LDCs

65. Fourteen of the 26 African least developed countries are land-locked thus cutting them off from major transportation facilities as well as from major markets including from intellectual and technical developments that are occuring today.23/ The structural weakness of the African LDCs together with their resource constraints make them especially vulnerable to external shocks.

66. The long overland distances over which imports of bulky agricultural inputs and export products must be hauled make the development of agriculture in the land-locked African LDCs particularly very difficult indeed. For example, depending

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22/ United Nations World Food Council, Progress in implementation of food plans and strategies in Africa, WFC/1982/2.

23/ Land-locked countries: Their characteristics and special development problems by Professor David H. Nowlan, July 1985.

on the country of transit, Niger has overland distances (through Benin, Ivory Coast, Nigeria) ranging between 225-2,690 kms; Mali 1,170-1,289 kms, Central African Republic 1,400-1,815 kms, Burundi 1,455-1,850 kms, Botswana 1,100-1,400 kms, Chad 1,715-2,015 kms etc. 24/ The problem of agricultural development in a country like Burundi is further complicated by the rugged terrain, which makes movement of agricultural inputs more expensive and also exposes the country to soil erosion especially in time of rain.

67. The land-lockedness nature of some of the African LDCs may lead to disruption of economic infrastructures such as roads, railways, posts and telecommunications. A long distance such as the one separating the capital city of Malabo and the main continental city of Equatorial Guinea (250km) makes the economy of that country vulnerable.

68. The economies of African LDCs as a group seem to be also vulnerable to short-term influences of droughts, floods, shortage in export earnings all of which in turn may provoke a food crisis.

69. Because they do not have much to export, many of these conditions make the African LDCs vulnerable to shortages of foreign resources with which to buy even food; consequently their low level of domestic savings becomes a major constraint to development. For example, in Gambia the shortage of domestic savings has been known to reduce the Government's ability to meet counterpart costs of externally financed projects and thereby the ability to utilize external assistance. 25/

70. On the other hand, there are problems that appear to be unique to individual countries. For example, the natural constraints such as those facing the Comoros as an archipelago with its very small surface area and human population; no natural ports and improvement of communications both within the country and with the outside world is expensive; or the vulnerability of some LDCs like Djibouti and the CILSS countries to arid climate and scarce water. In Djibouti in particular, where the priorities, among others, are (i) the war on poverty in the urban and pastoral sector and (ii) reduction of the nation's food dependency; a development-oriented approach to rural poverty and food dependency has still to be conceived. 26/

24/ Ibid, p.3.

25/ UNCTAD: The Least Developed Countries 1984 Report, p. 141.

26/ UNDP: Report on Development Assistance to Djibouti in 1984, p. (iii).

71. The possibility of serious drought is said to always hang over Botswana and the small number of exportable crops leads the country's exports to vulnerability of price fluctuations. The economy is particularly vulnerable because Botswana is land-locked and heavily dependent on South Africa. About 85 per cent of imports are furnished by that country and almost the whole of the export of meat and metals transit through it.

72. Export earnings in the Gambia are highly vulnerable to fluctuations arising from anticipated either production or world prices of that country's predominant export product of groundnuts. Groundnuts production in the Gambia has fallen considerably and at 105,000 mt in the shell in 1980 it was at its lowest level in seven years.

73. Land-lockedness, a limited national market and a restricted resource base are some of the factors that render for instance Lesotho vulnerable to external economic and political pressures. The Republic of South Africa accounts for 90 per cent of its trade. Furthermore Lesotho depends on South Africa for its energy, transport and communications.

74. Limitation of the monetized sector of national economies (as is the case of Guinea-Bissau) makes Governments at best vulnerable to external aid for their development. Lack of storage and transport facilities means that countries are exposed to shortages in the advent of a drought particularly in capital cities since food is not evacuable in some parts of African LDCs due to lack of roads.

75. In the 1980s the world economic crisis added to the vulnerability of African LDCs' debt servicing capacity. For example, in 1980 and 1983 the heaviest debtors among these countries were Sudan, United Republic of Tanzania, Guinea, Ethiopia, Somalia, Mali and Togo in that descending order of magnitude. The problem of debt service payment in the period 1977-1984 has been such as to force countries (e.g. Central African Republic, Malawi, Niger, Sierra Leone, Sudan, Togo and Uganda) to enter into negotiations with both the Paris Club and also (e.g. Malawi, Niger, Sierra Leone, Sudan and Togo) with Commercial Banks. 27/

76. It is in fact all the factors enumerated in paras. 65-75 above put together that seem to give the African LDCs, particularly the land-locked ones, a sense of desperation. There can be no doubting that a whole lot in the development of the African LDCs and more particularly the land-locked ones will depend on the co-operation

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27/ UNCTAD: The Least Developed Countries 1985 Report, (TD/B/AC.17/25/Add.2 (B), 2 July 1985.

they and their immediate transit African neighbours are ready to exercise in order, as stated in the SNPA, "to simplify transit procedures and to improve transit transport, storage and port facilities for their international trade, taking into account the needs and means of the landlocked least developed countries and their transit neighbours". 28/

III. FOOD STRATEGIES AND GENERAL AGRICULTURAL DEVELOPMENT POLICIES

(a) Past agricultural development policies

77. Agricultural development policies in many African LDCs in the 1960s and 1970s were products of the colonial strategy of concentrating on export crops such as coffee, tea, cocoa, sisal, cotton, natural rubber etc. and paying little attention to food crops such as rice, maize, millet, sorghum, roots and tubers and there has all along been a notion that there would be a conflict between the development of both export and food crops together.

78. There is ample evidence to show that the hangover of these policies lingers on as subsistence sectors in these countries are still fairly substantial but less able to provide food and other needs to their population. The neglect of the food production sector in the African LDCs is such that even in times of favourable weather not enough is produced even by countries agronomically better suited to do so. State revenues are levied on exports of farm products but not all the funds received are ploughed back into agriculture either for further development of the export crop or of food crop. For example, a recent study on Sierra Leone has observed that "produce buying system is devised mainly for generating tax revenue rather than protecting smallholders and providing inducements for increased production". 29/ In the same vein, a recent ECA study (E/ECA/CM.10/21) has noted that "while low absorptive capacity could limit the amount of investment in agriculture, in most of these countries, however, the marketable agricultural surpluses have been invested in non-agricultural activities in favour of the urban-populations with consequent low investment in agriculture and rural infrastructures". 30/

28/ Report of the United Nations Conference on the Least Developed Countries, Paris, 1 to 14 September 1981, p. 20.

29/ FAO: Rural Povery and alleviation measures in Sierra Leone, 1983.

30/ ECA: Apparent discrepancy between increasing resource allocation to food and agriculture in Africa and the declining performance of the sector, (E/ECA/CM.10/21), February 1984, p. 6.

79. Without the availability of such funds originating in agriculture, usually diverted to other unproductive pursuits, the potentials of the agricultural, animal husbandry and fisheries sector remain largely unexploited or under-exploited in the African LDCs. No wonder the rates of growth in food and agriculture, animal husbandry and fisheries development have not been able to cope with the needs in these countries of fast increasing population at least in terms of food, meat and fish. The growth rate target, for example, of 4 per cent or more for agricultural production pronounced in the Substantial New Programme of Action, therefore, remains largely a dream.

80. Whereas one of the preconditions for an improvement in food production is the increase of budgetary resources to agriculture including related activities such as livestock production, fishery and forestry, the allocations to these sectors do not appear to have taken due cognizance of the strategic importance of the food and agriculture sector in general. For example, an ECA study has shown low percentage of agricultural expenditure in total for six LDCs for the plan period indicated in brackets: Burundi 22.2 (1978-1982); Gambia 14.9 (1975-1980); Malawi 8.2 (1971-1980); Togo 21.8 (1975-1980); United Republic of Tanzania 15.2 (1976-1980) and Uganda 20.0 (1976-1980). 31/

81. Among the preconditions of the SNPA for further production in the LDCs is the institution of policy on prices (see SNPA para. 13), which should provide incentives to production. However, as has vividly come out in a recent ECA study on pricing policies (E/ECA/LDCs.4.4 of 24 March 1984) some of the major problems identified among the African LDCs relate to lack of co-ordination among various government agencies in the administration of controlled prices, outdated nature of price legislations and inadequate financial and manpower resources to develop appropriate price formation techniques. Certainly, the higher prices farmers pay for farm inputs compared to prices they receive for their farm products in no way serve as incentives to increase production. 32/

82. In addition to animal diseases and aridity of certain ecological subregions, the livestock industry in many countries in the past has been plagued by lack of proper price incentives, introduction of modern breeding methods including pursuit

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31/ ECA: Apparent discrepancy between increasing resource allocation to food and agriculture in Africa and the declining performance of sector, p. 7.

32/ FAO: Production Yearbook, vol. 1983.

by the pastoralists of the traditional value placed on quantities rather than the quality of the animal. Consequently, the tremendous production potential for meat in the Sudano-Sahelian zone has not been exploited to the full.

83. Equally, the development of the fisheries sector continues to suffer from lack of solid administration, poor knowledge of existing potential and inappropriate methods of fishing, fish handling, processing and marketing. 33/

84. Among other factors that have prevented a proper development of the food sector in the African LDCs may be mentioned lack of proper land tenure, technological, marketing, training, investment general economic policies, making readily available to rural people consumer goods etc, which may well be areas needing looking into more closely for future development and strategy.

85. As may have by now become obvious food situation even within the same ecological subregion varies from country to country. As such any policy or programme designed to improve the situation would of necessity have to be country-specific and even actual area-specific and would also have to take into account the need to maintain ecological balance and resource conservation as one of the main objective goals for economic and social development of rural areas. Moreover, as has been rightly observed in a study of food policy analysis "a strategy for agricultural development within a food policy framework is broader than a simple concern for expanding farm production, important as that is for other elements to be effective. Growth in other sectors, job creation, income growth and distribution, access of poor people to food, and household and national food security are also integral components of a production strategy". 34/

86. Literature on African economic development in general and on agriculture in particular is replete with citations of factors that continue to constrain food and agricultural production and on which therefore attention need to be focussed if the situation is to be improved.

33/ UNCTAD: The Least Developed Countries, 1985, p. 17.

34/ Food Policy Analysis, 1983, p. 141.

87. These factors include lack of: agricultural training and manpower development; research and yield-augmenting technology; investment in physical, structural and social infrastructure (e.g. roads, irrigation systems, storage facilities, processing plants, marketing and credit institutions); improvement of the physical environment by preventing deforestation, erosion of soil, livestock overstocking, shifting cultivation; investment of resources into agriculture to finance farmers research, agricultural extension etc. The list also includes health, housing, water supply because they provide some of the basic requirements of the rural population. And there is interregional and intra-African co-operation through which capital and technical assistance, food aid and security, international trade and research and transfer of technology should be sought. 35/ It is indeed an impressive list and while recognizing the constraint of resources that governments have, it is also one thing to have a declaration of intent in a development plan and another thing to implement it.

88. It also needs emphasizing that even with the availability of all needed resources, implementation of all the above elements by themselves may not suffice. Other negative factors such as internal civil disorders and prolonged wars need to be avoided in order to permit food production objectives to be realized.

(b) National food strategies:

89. The declared intentions of the Governments of the African LDCs on how to tackle food self-sufficiency are very impressive indeed and the only thing remaining is matching these intensions with deeds. A sample of these intentions is indicative of the awareness and recognition of the existence of the problem of self-sufficiency in food.

90. In Lesotho, the Basic Agricultural Services Programme (BASP) aims at increasing production of major food crops and a more mechanized food self-sufficiency programme is on; according to its Ten-year Perspective Plan (1984/1985 to 1994/1995) the Government of Socialist Ethiopia has attached top priority to the development of the agricultural sector and to accelerate food production and exceed the growth rate of population etc.; Malawi's agricultural policy lays emphasis on attaining self-sufficiency in food; according to United Republic of Tanzania's Comprehensive New Programme of Action (1981-1990) the main elements are the consolidation and modernization of existing agricultural installations and institutions and a sharp increase in the production of food and cash crops in order to improve local consumption

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35/ Proposals for food and agricultural development 1986-1990: (E/ECA/CM.11/39). February 1985.

particularly of milk and meat; the development strategy in Burkina-Faso aims at achieving self-sufficiency besides satisfying other population basic needs and in the 1982/1986 Development Programme 33 per cent of development resources would be allocated to the agricultural sector; Government development priorities and objectives in Chad are the achievement of food self-sufficiency, health and education as in the SNPA; food self-sufficiency in Mali is one of the main objectives of the Government's development policies; and in the Sudan, the Government's development policy in the Fourth Three-year Public Investment Programme (1983/1984 to 1985/1986) is to consolidate the progress already achieved in maintaining self-sufficiency in staple food crops and edible oil etc. Botswana, Burundi, Rwanda and Togo are also among African LDCs that have openly declared food self-sufficiency as a goal in the development of their food and agricultural sector. 36/

91. An examination is made below of the efforts which Governments have been and are making to increase food production within the broad frameworks of (i) Regional Food Plan for Africa (ii) the Lagos Plan of action (LPA) and (iii) the Substantial New Programme of Action (SNPA).

(i) Regional Food Plan for Africa

92. The Regional Food Plan for Africa (1978) does not distinguish between African LDCs and Non-LDCs. However, it postulates a growth rate for agricultural production of 3.9 per cent a year for 1980-1985 and 4.2 per cent for 1985-1990 - targets which would be achieved through the institution of major development programmes backed by heavy investments to improve irrigation, extend rainfed agriculture, develop use of mechanical power and increase livestock production and fisheries. 37/

93. The problems associated with food deficit situations in individual countries are multifarious but they are what should prompt governments to formulate national food production strategies and policies for the improvement of food self-sufficiency. The Regional Food Plan for Africa singled out some of these problems. They include: scarcity of natural resources, which may arise because of a number of reasons e.g. a large proportion of fertile land being occupied by export non-food crops, dryland conditions, land fragmentation of land and diminution of soil fertility; subsistence - production oriented system exacerbated by government policies with respect to prices

36/ UNCTAD: The Least Developed Countries 1984 Report.

37/ Regional Food Plan for Africa, ARC/78/5, July 1978.

of agricultural products, imports, foreign exchange and rural consumer goods, rural transport and marketing often working to the disadvantage of the producer; increasing demand for preferred foods - usually wheat and rice, which may not be produced cheaply locally and are associated with the increase in income of the non-food producing population in urban areas; dietary deficiencies such as those observed in root-based diets; and production instability due also to man-made causes such as over-stocking and lack of long-term development strategies, re-examination of the agricultural production system and settlement location. 38/

(ii) The Lagos Plan of Action

94. The Lagos Plan of Action, whose contents draw heavily on the Regional Food Plan, set as its main objectives: "to bring about immediate improvement in the food situation (by 1985) and to lay the foundations for the achievement of self-sufficiency in cereals and in livestock and fish products", in which priority action should be directed to securing a substantial reduction in food wastage and attaining a markedly higher degree of food security. These objectives, however, have remained largely unrealized.

95. In the case of cereals, which in the Sahelian region account for more than 70 per cent of the energy supplied, actual imports (both commercial and food aid) have been on the increase in recent years. Maize and also sorghum constitute the staple foods consumed by most groups in Central, Eastern and Southern Africa. Because of the inadequacy of these, including roots, tubers and fruit in poor sections of the population, about 25 per cent of the population of these regions is estimated by FAO to be at risk of malnutrition. 39/ The cereals import pattern in table 4 below is indicative of the seriousness of the situation for selected countries.

Table 4: Imports of total cereals, 1973 and 1983
(Thousand tons)

	Burkina Faso	Cape Verde	Chad	Mali	Niger	Burundi	Ethiopia	Rwanda	Somalia	Sudan	Tanzania	Botswana	Lesot
1973	440	35	20	193	60	6	19	8	50	203	43	29	59
1983	59	45	54	183	45	20	325	23	246	434	214	52	91

Source: FAO Statistical Databook on African countries affected by emergencies, May 1985.

38/ Regional Food Plan for Africa, ARC/78/5, July 1978.

39/ FAO: Food and agriculture situation in African countries affected by calamities in 1983-1985.

96. It should, however, be realized that before the situation of imports of cereals and food in general can be reversed, time should be allowed for rehabilitation and recovery of agriculture in many countries. Time should be allowed, for instance, for recovery of appropriate seeds with high-yield potential as their stocks in many cases may have been depleted through consumption as food during periods of shortage.

97. Animal husbandry is one of the most important components of the economy throughout sub-Saharan Africa. In times of drought large numbers of livestock die very fast as a result of shortage of feed and water as well as incidence of disease - hence little or no availability of protein for the pastoral and the sedentary populations. The current international action to support national remedial measures is further testimony to the plight of many African LDCs. For example, remedial measures in Botswana for feed, seed and fodder, in Chad for animal feed and vaccines and equipment, ... in Ethiopia for assistance to control tick-borne diseases, in Guinea for supplies, equipment and vehicles for animal health protection, in Guinea-Bissau for veterinary supplies, animal protection measures, and in Mali for assistance in animal destocking and animal health measures, financial and technical support in the processing of meat to overcome export restrictions placed on animal products as a consequence of animal diseases etc. 40/

98. The measures indicated above are largely in line with the actions recommended in the Lagos Plan of Action: to control animal diseases, range management, animal feed and infrastructural development. However, as in the case of cereals,(para 96 above) time needs to be allowed for rehabilitation and recovery of lost animals especially in those African LDCs that were seriously hit and are still threatened by drought.

99. The Lagos Plan of Action set the target of fish production from African waters to increase by 1 million tons annually by 1985, which should permit a rise of 1 kg in the level of average fish consumption per person between 1980 and 1985. However, according to FAO's Yearbook of Fishery Statistics, Vol. 56, 1983, 1 million tons annually is a very optimistic figure compared with the highest nominal catches realized in 1983 in three of the leading African LDCs - Chad (110,000 metric tons), Uganda (172,000 metric tons) and Tanzania (272,498 metric tons). However, as noted in para 83 above, certain ongoing practices in the fishing sector need correcting in order to set fishing activities on the right path.

40/ Ibid.

(iii) The Substantial New Programme of Action (SNPA)

100. According to Chapter I of the Substantial New Poogramme of Action (SNPA) on general and national measures required to improve food production, the African least developed countries in general would be required to pay particular attention to a number of measures including expansion of cultivable land, land tenure, productivity, farming techniques, research, manpower, physical infrastructure, reduction of post harvest losses, agricultural institutions and pricing policy. 41/ These measures are reviewed below in order to see the extent to which the African least developed countries are committed in respect of achieving food self-sufficiency as one of the main objectives of their national developments which they have pledged in endorsing the Substantial New Programme of Action, the Lagos Plan of Action and the Harare Declaration. Additionally, the review should also assist in throwing light on why even increasing food production in some cases has not been able to match the growth in food demand.

Expansion of cultivable land

101. The analysis of food production in the African least developed countries carried out under Section II above confirms the observation that "while in most developing countries outside Africa the bulk of incremental production comes from productivity increases, in Africa area expansion has been the primary source of production increase, accounting on average for 60-70 per cent of the total; for comparison: for other developing countries the average is about 20 per cent of the total". 42/ Nevertheless, there are some African LDCs (e.g. Lesotho, Djibouti and Rwanda) where additional cultivable land is unthinkable and in which raising productivity of the existing cultivable land should be considered a sine qua non.

102. In Lesotho, for example, because of the mountainous terrain, much of the land is of little use agriculturally. Only 13 per cent of the land is suitable for cultivation and practically all of it is in use.

103. Arable land in Djibouti is around 0.23 per cent of the total area of this largely desert country with hot and arid climate. As such, the country's main occupation remains the servicing of the region through its port, airport, railway and warehouses.

41/ Report of the United Nations Conference on the Least Developed Countries, Paris, 1 to 14 September, 1981, p. 12.

42/ Agricultural Policy and its relationship to food policy in Sub-Saharan Africa: Economic Development Institute of the World Bank, May 1985, p. 211.

104. Rwanda, which, among the African LDCs, has the highest population density of 182 persons per square kilometre, is mostly mountainous and only half of its total area is cultivable. Farmland is obviously not enough and there is already an over-exploitation of available cultivable land with the consequence of impoverishment of the soil.

105. On the other hand, while estimates are missing for some LDCs of the amount of land currently under cultivation and how much more could be brought into farmland, there are countries (e.g. Botswana, Comoros, Ethiopia, Guinea, Niger, Somalia and Sudan), 43/which, for one reason or another, have plenty of cultivable land still lying more or less idle. In Botswana, for example, about 4.5 million hectares would be suitable for farming but only 10 per cent of this is being exploited. In the Comoros, land available for food crops amounts to 51,000 hectares whereas only 17,000 hectares are currently being cultivated.

106. In Ethiopia, cultivated land is only about 10 per cent of 790,000 square kilometres of arable land (650,000 km^2 of permanent grazing and 140,000 km^2 of cultivated or fallow land). In Guinea, arable land is estimated at 7.4 million hectares of which 1.9 million are actually being farmed and in Niger only 3 out of 15 million hectares of arable land are under cultivation. In Somalia, arable land accounts for 13 per cent of the total area of the country of 8.2 million hectares and only 650,000 hectares or 1 per cent is cropped. In the Sudan, only 1.3 million out of 200 possible million hectares are being farmed.

Structural problems of land tenure

107. In spite of the paucity of information on the solutions to the structural problems which African LDCs are seeking, it can be said that each has a land tenure system of its own. In practice, however, the extent to which a farmer will commit expenditure in developing land and its production is determined by the type of tenure he has to land because in the final analysis the security of land tenure is the basis that gives accessibility to credit, services and investment.

108. Yet, land reform is a very sensitive issue. In a statement on rural development before the World Conference on Agrarian Reform and Rural Development in July 1979, President Julius K. Nyerere stated: "There are now only a few states without some kind of land reform laws. But in too many cases these laws are cosmetic; or else

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43/ UN: The Least Developed Countries: Introduction to the LDCs and to the Substantial New Programme of Action for them, 1985, Chapter III, pages 49-122.

the machinery of the State does not enforce them against the opposition of local or international vested interests".

109. In Ethiopia, all rural land previously predominantly feudal was made public property in December 1974. 44/ On the other hand, land tenure in the Sudan exists under (a) large-scale government schemes, (b) large-scale private farming (c) owner-operated farming and (d) subsistence farming under communal forms of ownership. 45/ In the western area of Sierra Leone ... tenure is by purchase agreements and elsewhere in the country is neither completely individualistic or communal and as such land is regarded as sacred trust held by the present generation on behalf of dead ancestors for the use of future generations. 46/

110. The traditional land tenure system in Lesotho doesn't provide adequate incentives because of the insecurity to the users and the Land Act of 1979 is said to have been introduced providing increased security of tenure including legitimate rights of inheritance.

Improvement of productivity

111. In order to improve productivity of agriculture in general and that of food production in particular, it is necessary that soil should be conserved as a top priority. In Ethiopia, for example, it has been estimated that the country loses about 2,000 million tons of soil annually due to erosion, which is equivalent to 79,000 hectares of one metre deep and capable of producing enough food to feed about 66,000 families. Hence, one of the Government's development objectives is to create awareness among nationals about the serious degradation of the country's natural resources, deforestation and overgrazing -- all leading to a high rate of soil erosion. 47/

112. The fertility of the soil needs to be restored by sparing such crop residues as stalks and bean and pea haulms for mulching purposes as well as for humus and hence restoration of soil fertility instead of using these for fuel as in Rwanda because of decreasing wood ... fertility. In addition, irrigation and drainage, proper use of farm tools, fertilizers and improved seeds should be encouraged as means of increasing productivity further.

44/ FAO: Rural Poverty alleviation: The case of Ethiopia, Rome 1984.

45/ FAO: Towards the alleviation of rural poverty in the Sudan, July 1985.

46/ FAO: Rural Poverty and alleviation measures in Sierra Leone, 1983.

47/ FAO: Rural Poverty alleviation: The Case of Ethiopia, Rome 1984.

113. The use of fertilizers (whether nitrogenous, phosphate or potash) in the African LDCs is such that use of even half a kilogramme to a hectare has yet to be reached in a majority of countries except in Cape Verde, Djibouti, the Gambia, Lesotho, Malawi and Togo. The significant point, however, is that wherever fertilizer consumption has increased yields per acre have also increased as a result. Low producer prices may be offset by subsidies of fertilisers and other inputs since the farmer will get more and therefore even more out of one hectare of land. But there is no guarantee of these subsidies continuing indefinitely as they tend to represent a heavy burden on the State overtime. Moreover, in such a system of subsidies there is always the risk of the mechanism being biased in favour of modernized farmers with the greatest political influence over the traditional farmers who are in the majority.

114. Governments have been known to fix the price of fertilizers as well as subsidize its importation and use by farmers (e.g. in Benin, Burkina-Faso, Cape VErde, Gambia, Guinea-Bissau, Malawi, Niger, Sierra Leone, Sudan and Togo) but its greater use appears to have been constrained by its bulky nature and therefore high cost over long land routes through which it must be transported. Its greater use is further limited by the fact that in a majority of cases subsidies are not directly to farmers but to transport agencies (e.g. in Gambia, Tanzania and Togo), fertilizer manufacturers (Malawi), cooperatives (Niger), importers (Sudan, Burkina-Faso) and farmers are left to pay for it. Even where subsidy is paid directly to farmers (e.g. in Burundi, Cape Verde and Guinea-Bissau) or even to farmers' organisations the amounts of subsidy must be very small as reflected in the small quantities of fertiliser used (see para. 119). It is particularly significant to note that even in sea-bound countries such as Cape Verde, Guinea-Bissau, Sudan and Togo etc. the use of subsidy has been limited by the c.i.f. value of fertilizer and transport distance of fertilizer distribution from port. Moreover, the prices which farmers have often to pay for fertilizers, pesticides, tractors and farm machinery are usually far above the prices they receive for their crops and this tends to act as deterrent for increased use of these inputs with the consequent reduction in agricultural output.

115. The number of tractors in use between 1974-1976 and 1982 has been on the increase everywhere except in Djibouti, Equatorial Guinea, Gambia, Guinea-Bissau, Sao Tome and Principé where their number remained stationary.

116. In addition to the use of fertilizers and appropriate farm tools, where possible, irrigation and drainage should be considered in spite of difficulties and odds such as in the Gambia where irrigation possibility is limited due to salt intrusion, not only in the river Gambia but into the whole basin whose development has been the concern of the Gambian Government.

117. Improved seeds are equally important if agricultural and food productivity is to be improved. According to information available from FAO and World Food Programme Special Task Force, a number of countries affected by calamities in 1983-1985 have anticipated establishing food crop seed projects. For example, Botswana for seed farms, Burundi, Cape Verde, Chad, Ethiopia, Gambia, Sao Tome and Principé, Sudan and Tanzania for production of foundation seed, Mali for rice seed and Rwanda for potato plant and seed production and improvement of basic planting material for vegetables, roots and tubers.

Development of indigenous farming techniques

118. There is a body of evidence to show that imported production inputs such as fertilizers, farm machinery and tractors, pesticides cost more than the prices farmers receive for their crops. Hence, as far as possible indigenous farming techniques should be developed and dependence of the rural sector on imported inputs reduced to the greatest extent possible.

119. Largely because of the imbalance between prices received by farmers and prices they pay for production inputs, however, it is doubtful that there is very much that needs reducing in the first place. Take tractor use and fertilizer consumption as examples: among selected African LDCs (read tractor units per 1,000 hectares in brackets) in 1980, only in Botswana (1.6), Lesotho (4.8), Somalia (1.5) and Tanzania (3.6) was one tractor or more available for 1000 hectares. Elsewhere the number was less than one (e.g. Burundi (0.0), Burkina-Faso (0.0), Cape Verde (0.8), Chad (0.1), Ethiopia (0.3), Mali (0.4), Niger (0.1), Rwanda (0.1) and Sudan (0.9). Similarly, fertilizer consumption per hectare in 1980 was highest only in Lesotho at 15.4 kgs. Elsewhere (read figures in brackets) it reached around 7 kgs in some countries (e.g. Mali (6.9), Sudan (6.5) and Tanzania (6.9) and in others either below 4 kgs or 1kg (e.g. Botswana (1.0), Burkina-Faso (1.7), Burundi (0.8), Cape Verde (3.1), Chad (0.3), Niger (0.8), Ethiopia (3.1), Rwanda (0.1), and Somalia (1.1).

120. The numbers of tractors per 1,000 hectares indicated above are very small indeed compared to 2.9 in Kenya or 8.0 in Zimbabwe or fertilizer consumption of 27.1 kgs and 68.3 kgs/ha respectively. These figures are clear indications of positive efforts towards use of inputs and achievement of higher productivity.

121. The above figures lead to the conclusion that most African farmers in the African LDCs are subsistence farmers who still cultivate their land with small hand tools, using the archaic method of fallow and using little or no chemical fertilizers and pesticides. The area of developing indigenous farming techniques certainly leaves much to be desired in most, if not all the African LDCs.

National research and dissemination of research findings

122. Practically every development plan recognizes agricultural research as vital to ensure constant improvement of crop yields and in raising net farm incomes. Yet, as was pointed out in another ECA study, "research institutions (in Africa) have been starved of resources. Many still focus more attention on export crops than on food crops that are important to small farmers, such as pulses, roots and tubers. Agricultural extension continues to be less than fully effective". 48/ This is inspite of the high flown language in which some development plans are couched. For instance, that stronger links would be developed between research and extension services and with other rural development agencies only to find that this is not so in practice. Or, for example, where, according to the six Year Plan of Economic and Social Development 1977/78-1982/83, agricultural development both in the traditional and modern sectors in the Sudan were to be given top priority only to find by July 1983 that not only were extension services limited with respect to coverage (one extension agent covering an area having about 7,000 farmers) but also lack of a technical package that the extension workers could offer to the farmers. 49/

123. There is also the general weakness of orienting research to the problems of the modern sector and forgetting the traditional sector.

124. In Somalia, where research in crops is said to be still poorly developed, agronomic research is being expanded and the training of pre-professional staff and technicians consolidated and substations developed to generate technology more readily applicable to different agro-ecological conditions. This is as it should be because expatriate staff are expensive to maintain particularly in countries with limited means of earning foreign exchange.

125. Political turmoil has not been kind to the development of research in Uganda where over the past two decades research facilities are said to have deteriorated and some stations have been run down in terms of personnel and facilities largely because of inadequate financing.

48/ ECA: Evaluation of the implementation of regional food plan for Africa (1978-1984) and a preliminary assessment of the food and agricultural aspects of the Lagos Plan of Action.

49/ FAO: Towards the alleviation of poverty in the Sudan, July 1983.

126. Overall, however, it seems that in the African LDCs for the most part development of food crop research as well as livestock or animal health research have as their main setback trained manpower and material inputs. Both are expensive but they are fundamental not only to food and agriculture but to livestock and fishery sectors.

Training of manpower

127. While experience of extension may be little in some African LDCs and therefore no trained personnel, there is general agreement that it is one of the most effective vehicles for propagating research and other development information to the farmers including stockowners. It is also generally recognized that functional literacy has a great role in accelerating the adoption of new farming techniques as well as changing the attitudes of farmers towards economic achievements. There is increasing need for training of tractor and machine operators, pump attendants and workshop staff essential to the expansion of irrigation and traditional and modern rainfed agriculture involving mechanisation. So also is there need to train middle-level technicians in the field of animal health as well as trained fishermen and operators in the new fishing technologies of fishing, fish processing methods, use and maintenance of equipment, refrigeration etc. as a means of boosting meat and fish production.

Development of physical infrastructure

128. Development of physical infrastructure such as rural roads, communications and storage play a crucial role in the development of the economies. In addition to facilitating the smooth movement of people, goods and services, rural roads encourage dispersal of economic activity to less developed areas while storage facilities for foodstuffs ensure their preservation over a longer period of time and could save life during a rainy day. The development of physical infrastructures in general (roads, railways, water and air transport, posts and communications) would reduce production and transport costs of food crops in various parts of the country but they call for a massive investment of capital in spare parts, maintenance equipment, workshops and tools, vehicles and railway rolling stocks and manpower training. Everywhere in the African LDCs the setback of development seems to lie in either one or all of these problem areas.

129. Owing to civil strife transport and communications often tend to experience a gradual decline and in that way presenting a major bottleneck to the growth of an economy as was the case of Uganda during the eight years of military administration. Thus conditions of political stability need to be taken into account in the totality of economic development.

130. In Malawi, the strategy in the 1980s is to complete north-south main roads giving greater priority to road connexions to neighbouring countries. Railway links with Mozambique and Zambia are planned.

131. In Botswana, Government's policy in the 1979-1985 Plan has been to provide communications for as many people as possible, which has resulted in communication system being concentrated in the more populous eastern corridor serving the major population centres.

132. In Guinea, poor transport aggravates post harvest losses and during rainy season almost two-thirds of the country cannot be reached. In Sierra Leone, it is said that constraints to agricultural development stem from insufficient transport infrastructure while in Guinea-Bissau roads and ports are not sufficient and seriously need repair.

133. One could go on to show that every African LDC Government has the problem of establishing proper physical infrastructure and how it intends to solve the problem. Suffice it to say that the very high cost of maintenance of roads, airport and other transport infrastructures is a major constraints for their efficient maintenance and will also limit their expansion in future.

Reduction of post-harvest losses

134. An earlier ECA study identified many ways in which food losses, post-harvest and otherwise, could be reduced. For example, plant protection from rodents and birds, prevention of rotting fruits and vegetables, developing species better suited for storability and processing, adopting proper planting and harvesting periods, having a thorough knowledge of climate relating to storage as well as using properly designed storage, packaging and food processing facilities. 50/ In fact, some of these methods are stipulated in the Lagos Plan of Action including the training of technical staff for food loss control work, mass media campaigns to educate the public on methods of reducing food waste etc.

135. The wide publicity given to the problem of post-harvest food losses has resulted in multilateral (e.g. UNDP, IFAD) and bilateral agencies (e.g. NORAD, USAID, CIDA, SIDA, DANIDA) pouring in resources to support both national and regional projects (read number in brackets) in some African LDCs under the execution of FAO e.g. Benin (1), Burkina-Faso (7), Burundi (3), Central African Republic (1), Ethiopia (5), Gambia (2), Guinea (1), Guinea-Bissau (1), Lesotho (1), Mali (2), Niger (1), Rwanda (1), Sierra Leone (4), United Republic of Tanzania (5), Togo (6), Uganda (1) and eight regional projects. 51/

50/ ECA: Evaluation of the Implementation of the Regional Food Plan for Africa (1978-1984) - E/ECA/CM.11/37, February 1985.

51/ Ibid.

136. Another measure emanating from government is, for example, a training workshop said to have been organized in the Gambia on preservation and marketing of produce in order to prevent losses of unsold food.

137. The African Regional Centre for Technology (ARCT) is also to be commended for having recently organized, in cooperation with FAO, a regional workshop on national programming and inter-country cooperation in the prevention of food losses as well as for other related projects initiated by it in food loss reduction.

Improvement and strengthening arrangements for rural credit, agricultural input supply and marketing and extension services

138. For the longer-term, sustained investments in agricultural research and extension are essential if the rate of food output is to be maintained. So also are rural credit, agricultural input supply and marketing essential to back up such a development as well as maintain it.

139. One general weakness in African agriculture is the practice of directing agricultural credit and extension services to the larger farmers. Furthermore, there is also limitation of research and extension with regard to coverage and effectiveness. For example, in 1983 there were in the Sudan 304 field extension officers in which one extension agent covered an area having 7,600 farmers; another 20,100 in eastern Sudan; another 10,380 farmers in Kordofan; and another 28,570 farmers in Darfur. 52/

140. Where farmers' credit cooperative does not exist, farmers have to rely on merchants who give them credits of consumer goods, which limits their choice of selling. In the Sudan, this practice is said to have led to the farmer receiving on average one third of the export price for his produce.

141. In Sierra Leone, the indebtedness of the rural poor is a common phenomenon as private money lenders meet the credit shortfall and they are known to charge 100 per cent interest. Equally, produce buying system there is devised mainly for generating revenue rather than protecting small-holders and providing inducements for increased production. 53/

142. Another equally important example of an inhibiting factor is a case in Ethiopia of allowing fertiliser and seed prices in the period 1977/1978 to 1981/1982 to escalate in contrast to relatively static or even declining producer prices, which tended to disfavour production for marketing. 54/

52/ FAO: Towards the alleviation of rural poverty in the Sudan, July 1983.
53/ FAO: Rural poverty and alleviation measures in Sierra Leone, 1983.
54/ FAO: Rural poverty alleviation: The case of Ethiopia, 1984.

143. The inhibiting factors noted above should not be taken to mean that many Governments of the African LDCs do not have arrangements of one form or another for rural credit, agricultural input supply and marketing and extension services. In fact, out of tradition, there are well-established institutions of marketing such as the famous Marketing Boards in English-speaking African LDCs and there are also either agricultural banks or similar arrangements here and there eventhough the weakness arises largely in their coverage.

Pricing policy

144. Pricing policy is a useful instrument in economic planning and management and everywhere among the African LDCs it provides a form of incentive to producers of goods and services including food. Well-designed agricultural pricing policies help to boost agricultural production. Where producer prices are announced in advance of the growing session speculation is done away with and the domestic economies are thus insulated from the instability generated by international price fluctuations. Although in some African LDCs pricing policies are used as an incentive to farmers to increase their marketable surplus, a note of caution has been sounded in an FAO study 55/ with regard to the controversial role of pricing policy in African agriculture in which several interacting sets of prices conflict with each other. For example, the consumer-oriented price control policies, which easily become costly, politically difficult to change and may deter further production of the foodstuffs. The same may be said of minimum price guarantees usually more in relation to export crops than to food crops, which may lead to a concentration on the former at the expense of the latter.

145. An earlier ECA study 56/ has clearly brought out the weaknesses of pricing policies in the African LDCs as including: lack of co-ordination among various government agencies in the administration of controlled prices, limited coverage, inadequate financial and manpower resources to develop price formation techniques; and the outdated nature of the price legislations. These deficiencies require correcting.

146. The conclusion that may be drawn from Section III(b) (iii) above is that inspite of the dearth of information on the progress the African LDCs are making towards the implementation of the WCARRD Programme of Action as prescribed in paragraph 14 of the SNPA, the declarations of intention by the respective governments

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55/ FAO: The persistence of food and agriculture crisis in Africa and the roe role of the international community.

56/ ECA: Pricing Policies in African LDCs: Issues for Consideration.

seem to far outweigh their actions. For the most part, government plans in the areas of the Programme calling for action on their part are largely couched in generalities. Specificity of exactly what governments are doing in each area or intend to do is very important because suggestions of further measures required to accelerate implementation and progress can only be forthcoming where there is full knowledge of what is being done. Agriculture should, nevertheless, be able to play the larger role of meeting not only the requirements of food but also of animal feed and requirements of agro-based industries. To be able to do so, however, it needs to be backed by adequate price policy, marketing organization, rural development planning with corresponding support services, especially research.

(c) Production potentialities

147. It would be incorrect to suggest that food and/or agricultural production possibilities have been exploited to the limits on all farmlands presently under cultivation in the respective African LDCs. In fact, it has been indicated in FAO'Agriculture Towards 2000 that an enormous reservoir of production potentialities, both physical and biological, remains untapped in the African countries including the African LDCs themselves. For example, the figures given for twelve selected African LDCs in Table 5 below amply confirm that agricultural production would increase considerably above the 1975 levels merely through the traditional method of increasing acreage harvested in order to increase output.

148. Output would increase by much more under Scenario A, which is more ambitious than Scenario B, given its assumptions of positive changes of power requirements from labour and animal to tractor, greater use of fertilizers, pesticides, good rainfall, rainfed land, fully irrigated land and use of improve seeds etc. To illustrate: under the less ambitious Scenario B, Sierra Leone, which is the best rice producer among the African LDCs (450,000 metric tons of paddy in 1984) would by the year 2000 double its production of 570,000 metric tons in 1975. Its production of maize and millet would be more than doubled by the same period and production of these grains would increase many fold in all the respective twelve countries selected (see Table 5).

149. In order for these production targets to be obtained, however, certain obstacles would have to be removed. These include, for example, the obstacle of inaccessibility owing to lack of roads, and lack of new and appripriate technology as to husbandry of tropical soils after removal of tree cover. Water would also have to be harnessed for agriculture beyond present levels. Livestock health conditions would have to be improved considerably and the food base expanded, especially the pasture potential of grasslands. There would also have to be greater than heretofore use of fertilizers, pesticides and improved quality seeds and furthermore there would be need for more

Table 5: FAO crop production programme: year 1975 and 2000 - scenarios A & B

		AREA IN '000 HECTARS			YIELD IN MT/HECTARE			PRODUCTION IN '000 MT			POSSIBLE PERCENTAGE CHANGES					
		1975	2000A	2000B	1975	2000A	2000B	1975	2000A	2000B	AREA 1975-2000A	AREA 1975-2000B	YIELD 1975-2000A	YIELD 1975-2000B	PRODUCTION 1975-2000A	PRODUCTION 1975-2000B
SIERRA LEONE	Rice	380	673	598	1.5	2.0	1.9	562	1375	1147	177	157	133	126	244	204
	Maize	11	16	15	1.0	1.6	1.6	11	26	24	136	136	160	160	236	218
	Millet	13	30	25	1.1	1.9	1.7	14	57	41	230	192	172	154	407	292
	Livestock															
MALAWI	Rice	43	98	98	0.9	2.2	2.2	39	214	214	227	227	244	244	548	548
	Maize	1037	1250	1211	1.1	1.9	1.7	1127	2340	2091	120	116	172	154	207	185
	Millet	120	288	287	0.8	1.2	1.2	102	353	351	240	239	150	150	346	344
	Livestock															
UGANDA	Rice	19	58	53	0.8	1.5	1.4	15	87	76	305	278	187	1750	580	506
	Maize	463	828	806	1.2	1.7	1.6	543	1369	1315	178	174	141	135	252	242
	Millet	860	1637	1251	1.2	1.8	1.5	1011	2974	1896	190	145	150	125	294	187
	Livestock															
GAMBIA	Rice	24	54	36	1.3	2.9	1.9	31	157	70	225	150	223	146	506	225
	Maize	5	10	9	1.3	2.3	2.1	7	24	19	200	180	176	161	342	271
	Millet	59	99	64	0.8	1.1	0.8	44	111	52	167	108	137	100	252	118
	Livestock															
CHAD	Rice	44	74	60	1.0	2.3	1.4	42	172	84	168	136	230	140	409	200
	Maize	8	26	16	1.7	1.9	1.7	14	49	27	325	200	111	100	350	192
	Millet	978	1400	1259	0.5	0.8	0.7	530	1170	892	143	128	160	140	220	168
	Livetock															
MALI	Rice	214	325	281	1.2	2.3	1.9	268	750	522	150	131	192	158	302	210
	Maize	87	160	108	0.9	1.5	1.1	79	240	116	183	124	166	122	303	146
	Millet	1215	1820	1622	0.8	1.1	1.0	957	1913	1560	149	133	137	125	199	161
	Livestock															
BURKINA FASO	Rice	40	94	58	1.0	1.8	1.3	39	171	78	235	145	180	130	438	200
	Maize	108	210	163	0.6	1.1	0.8	64	171	78	185	150	183	133	267	121
	Millet	2037	2164	2132	0.5	1.0	0.9	1044	2180	1896	106	104	200	180	208	181
	Livestock															
TANZANIA	Rice	133	462	326	1.1	1.9	2.0	152	900	653	347	245	172	181	592	429
	Maize	1167	1796	1443	0.7	1.4	1.3	824	2529	1932	153	123	200	183	306	234
	Millet	525	968	771	0.7	1.0	1.1	370	945	813	184	146	142	157	255	219
	Livestock															
GUINEA	Rice	440	727	674	0.9	1.2	1.2	393	876	784	165	153	133	133	223	194
	Maize	400	838	603	0.8	1.1	0.9	310	925	546	204	147	137	112	298	176
	Millet	246	466	395	0.3	0.4	0.4	80	198	154	189	160	133	133	247	192
	Livestock															
NIGER	Rice	18	44	35	1.7	9.3	2.5	30	145	88	244	194	194	147	183	293
	Maize	10	7	7	0.6	1.2	1.1	6	8	8	70	70	200	183	133	133
	Millet	2810	3022	3057	0.4	0.7	0.7	1147	2238	2111	110	108	175	175	195	184
	Livestock															
CENTRAL AFR. REPUBLIC	Rice	13	33	28	0.9	1.3	1.2	12	44	34	254	215	144	133	366	283
	Maize	105	189	149	0.4	0.6	0.5	43	120	78	180	142	150	125	279	181
	Millet	69	150	109	0.6	0.8	0.7	42	119	76	217	158	133	116	283	181
	Livestock															
BENIN	Rice	8	50	48	1.7	2.0	1.6	13	100	77	625	600	117	94	769	592
	Maize	320	408	373	0.7	1.1	1.0	209	467	362	127	116	157	143	223	173
	Millet	118	202	175	0.7	1.0	0.9	83	200	159	171	148	143	128	241	191
	Livestock															

Source: FAO computer printout.

scientific and co-ordinated management as well as international agreement on the Law of the Sea as a means of facilitating the development of the fisheries sector. 57/

150. As appropriately stated in Chapter II of the Special Programme of Action for improvement of the situation and rehabilitation of agriculture in Africa, "Africa has adequate potential, the judicious exploitation of which should serve as a basis for its development. The Lagos Plan of Action serves in that respect as a framework to which African Heads of State and Government have comitted themselves". 58/.

151. The African LDCs also need to take seriously and implement without delay Africa's Priority Programme for Economic Recovery, 1986-1990, adopted by the 21st Session of the Assembly of Heads of State and Government of the Organization of African Unity in July 1985. This programme, which has short-term, medium and long-term measures at the national, subregional and interregional levels is a cross-section of programmes in food and agriculture, human resources, science and technology, trade and finance, transport and communications, environment, energy, women and development and population.

152. To cite only one example, the objectives in the area of food and agriculture are largely (i) to combat food emergencies, (ii) rehabilitate agriculture and (iii) structural reforms through the adaption of long-term measures such as development of research; technology, and distribution systems; training of skilled manpower and improvement of living conditions in rural areas; extention of cultivable areas; improvement of rural infrastructures; strengthening institutional and management capacity; support activities to agriculture by other sectors; and restorations of ecological balance and the implementation of a policy on organic matter - all of which do not differ in a significant way from the Substantial New Programme of Action (SNPA) for the LDCs during the 1980s.

57/ UFC: Preliminary assessment of the World Food Situation present and future, April 1974, p. 7.

58/ Africa's Priority Programme for Economic Recovery 1986-1990, AHG/Decl.1 (XXI).

IV. SUMMARY AND RECOMMENDATIONS

1. Summary

153. Agriculture is the most important single sector in all the African LDCs (except Djibouti) in 1982 having accounted on average for around 36 per cent of their Gross Domestic Product (GDP). Distribution of population is such that the majority (fifteen) of LDCs have populations of under five million and their growth rates in some countries are as high as three per cent.

154. In general, the good performance of both the export and food sectors during the 1960s has given way to anxiety for the future. The problem of food shortage in particular [illegible] in the 1970s with the slowdown in the rates of growth of real output in the developing countries, including, for that matter, African LDCs. The problem of food shortage for the African LDCs was intensified and precipitated in the early 1980s by the most devastating drought in living memory, which wreaked havoc in food and livestock production in 20 African LDCs.

155. Among the main food crops grown in either some or all of the five ecological subregions embracing the 26 African LDCs are maize, millet, sorghum, rice, pulses, root crops (cassava, sweet potatoes, yams), with production quantities varying from country to country depending on the agricultural production potential as well as food production strategies and policies pursued in each country. Meat and fish are also important additional diet items.

156. The emerging food production picture along ecological lines in the African LDCs gives cause for concern. For example, in West Africa, per capita food production peaks attained in the 1970s declined considerably during the 1980s reflecting partly adverse climatic conditions and partly inadequate investment in the food production sector. Everywhere in the subregion the increase in the production of coarse grains in the past tended to vary with the rise and fall of acreage under crop, which means that productivity of cereals leaves much to be desired.

157. The overall food production situation in Central Africa showed a slight improvement only in the Central African Republic during the period 1974 to 1984. Paucity of statistical data, however, prevents a meaningful analysis of food situation in Equatorial Guinea.

158. Growth rates for the production of cereals (maize, millet and sorghum) in Eastern and Southern Africa were considerably above those of population in Burundi, Ethiopia, Rwanda, Somalia and Tanzania during the period 1971-1980. This was also true of roots and tubers in Ethiopia, Rwanda and the United Republic of Tanzania during the same period. The quantity of rice produced in the subregion is statistically important only in the United Republic of Tanzania and Malawi. Production of pulses and vegetables has been generally good in the subregion except in Botswana, Burundi and Lesotho in recent years while meat production was also disappointing in Botswana and Burundi in the period 1974-1984. Nominal fish catches have registered considerable increases notably in Somalia and Tanzania in recent years but the occuption of fishing in the subregion in general is still beset with the basic problems of replacing open fishing boats with motorized boats and modern fishing gear, repair shops and construction of fishing harbours with the necessary freezing equipment.

159. Food production in the Sahel has generally had a checkered history of either zero or negative growth and cereals production increases or decreases, for example, tend to be governed by changes in acreage harvested suggesting that present cereals productivity calls for improvement. On the other hand, productivity in rice is reasonably high in Burkina-Faso, Mali and Niger but area sown has remained constant in Niger while it has been scaled down in Gambia and Mali and has been on the decline in Burkina-Faso.

160. Vegetable production has been good in the subregion except in Cape Verde and Gambia and meat production in the livestock countries of Burkina-Faso, Mali and Niger did not increase as desired in recent years because of prolonged drought conditions. In the fishing activity only in Cape Verde was there a remarkable development. Elsewhere in the subregion the activity either stagnated or showed deterioration.

161. The real growth rate of food production in the Sudan in the North African ecological subregion in the period 1970-1980 was estimated at 2.6 per cent compared with a population growth rate of 3.1 per cent. The decline in primary cereals production in the 1980s may be associated with the reduced use of production requisites e.g. fertilizers and insecticides, which started in 1977 owing to shortage of foreign exchange and diversion of resources into new projects.

162. Overall growth of food production rate declined in the African LDCs as a group in the period 1980-1983 in which annual growth rate fell from 5.9 per cent in 1980-1981 to 2.9 and 0.1 per cent in 1981-1982 and 1982-1983 respectively and the relatively good performance in Botswana, Burundi, Gambia, Mali, Sudan and Uganda was due to high annual growth rates. Otherwise per caput food production in the African LDCs has been on the decline since the 1970s.

163. As a consequence of this food production pattern, per caput daily supplies of calories and protein have been reduced to undesirable nutritional levels in many countries. Thus, the food self-sufficiency objectives decreed by Governments in their national plans have therefore not been attained and food aid and commercial food imports particularly of cereals in ever increasing quantities characterize the situation in most of the African LDCs. This is a trend likely to continue unless drastic measures to reverse it are put in motion.

164. However, commercial food imports on a large scale are not without adverse effects on the development programmes of the African LDCs as funds tend to be diverted in order to solve a food emergency situation. Moreover, food aid should never be allowed to get consumers hooked on it to the point of discarding traditional foods or even of discouraging its local production.

165. It would, however, be exaggerative to associate past declining food production pattern in the African LDCs with just the drought conditions alone as other factors such as production programmes, the extent of the application of appropriate technology, support to agriculture, expansion of arable land, use of production requisites and the development of irrigated agriculture have an important place in the production process and hence their past role would also need to be taken into account in a food production evaluation exercise.

166. By allocating a greater percentage of public expenditure to agriculture, some Governments of the African LDCs may have demonstrated a new commitment to agricultural production but this effort needs stepping up further. Investment in new and appropriate technology must be recognized as vital because this is what has been the basis of low prices of many agricultural commodities in international trade in which only low cost producers benefit.

167. While policy reform, agricultural research and the development of human resources lie at the base of a moving food and agriculture, we should not, however, lose sight of the fact that the vulnerability of the food sector in many African LDCs is a child of many factors beyond policy reform, research and human resources development.

168. For example, the long overland distances over which imports of bulky agricultural inputs (e.g. fertilizers, farm machinery etc.) and export products must be hauled make the development of agriculture very difficult. Or even the landlockedness nature of some African LDCs which may lead to disruption of economic infrastructure such as roads, railways, posts and telecommunications; or the problems that appear to be unique to individual countries: e.g. Comoros and its problems of surface area; Botswana and the possibility of drought said to always hang over it, and the small number of exportable crops leading to vulnerability of price fluctuations Gambia and its dependency on one crop (groundnut) whose prices are highly vulnerable to world price fluctuations; Guinea-Bissau's limited monetized sector of the national economy; Lesotho's limited national market; and the vulnerability of African LDCs' debt servicing capacity as well as the special vulnerability of their hosting refugees and persons affected by natural disasters.

169. Nevertheless, it should be clear that the objective of food self-sufficiency by itself is elusive. While comparative advantage is not a viable basis for formulating a food strategy, there is a need by the African LDCs to ensure that "food self-sufficiency" as an objective is accepted by those actually engaged in production: that is, the farmers so that the idea will become a motivating force for increasing food production.

170. Another equally important dimension that should not be ignored is population pressure and its toll on the environment in which depleted forests in search of firewood and charcoal expose land to soil erosion; institutional development and physical infrastructure. Moreover, it should be appreciated that skilled workers; trained professionals, presence of financial institutions and health care systems including stable governments and good transport networks all count as valuable ingredients whose lack will retard overall development and, not least, that of producing enough food where it is physically and agronomically possible to do so.

171. Agricultural policies in many African LDCs are still a hangover from colonial past. Because of the diversion of funds originating in agriculture, the potential of the agricultural sector, animal husbandry and fisheries remain largely unexploited or underexpolited. Additionally, a host of other factors including proper land tenure, new technology, marketing, training, investment, general economic policies etc. have prevented a proper development of the food sector. Nevertheless, there is a need to strike a balance between food and export crops in countries which export agricultural products in order that they can maximize their export earnings and thereby also minimize food imports.

171. The declared intentions of the Governments of African LDCs on how to tackle food self-sufficiency, either through the Regional Food Plan for Africa, the Lagos Plan of Action or of the World Conference on Agrarian Reform and Rural Development (WCARRD) of the Substantial New Programme of Action (SNPA) are very impressive indeed and the only thing remaining is to match these intentions with deeds more than heretofore.

172. Food self-sufficiency is a goal that needs to be seen within the framework of overall development of each African LDC. Equally, the extent to which the scarce national resource of land (for some countries) is used with efficiency and the rate at which the subsistence sector of food production is being converted into a modern food production sector in order to cope with rapidly increasing demand. For agriculture to be able to play even the larger role of meeting not only the requirements of food but also of animal feed as well as the requirements of agro-based industries, its development must be backed by adequate pricing policy, marketing organization, rural development planning with corresponding support services, especially research.

173. As someone rightly observed in the AID Horizon of Spring 1985, Africa will always have periods of drought and therefore that agricultural, environmental, and, indeed, all development policy must be directed towards reducing, not increasing vulnerability to the next drought and the ones after that.

2. Recommendations

174. The assessment of food strategies carried out under Sections I to III above leads to the conclusion that there is, among others, a greater need among the African LDCs for the following:

- Spelling out more clearly, not only the objectives of national food strategies for food self-sufficiency, nutrition, food security etc. but also the ways and means of attaining these objectives. Such clarity will also act as a good basis for the provision of desirable technical advisory services etc.;

- Bringing about an appropriate balance between food and export crop production in which the development of export crop may facilitate the introduction of new techniques and facilities which food crop production can use to improve production so that countries can maximize their export earnings as a means to finance essential imports as well as facilitate reinvestment in agriculture and at the same time minimize food imports;

- Given the ecological differences between the countries, proper backing should be given to the farmer (big/small) with an appropriate package of support services (e.g. technology, research, marketing, agricultural extension, credit, seeds, fertilizers, agrarian reform, pesticides, primary health and basic education facilities, infrastructures of storage, transport and water supply, etc.) not only to supply food, animal feed as well as the requirements of agro-based industries but to establish a basis for lasting growth and development. This will need following through investment in relation to existing domestic markets in rapidly growing urban areas;

- Having appropriate pricing policies for agricultural products as incentive for increased production;

- Making readily available adequate supply of consumer goods to the rural population;

- Improving livestock breeding, control of animal diseases and improving pasture and watering conditions;

- Improving fisheries management especially the system of processing, conservation and sales of fish production;

- Using food aid not to depress prices and thus discouraging local food production and delaying urgent investment but as a tool to finance development in general and food production in particular;

- The African LDCs need to implement without delay, among others, the food and agriculture part of Africa's Priority Programme for Economic Recovery, 1986-1990 in order to combat food emergencies, rehabilitate their agriculture and ensure a lasting productive situation through the development of appropriate structural reforms;

- Matching the commitment to increase food and agricultural production with needs in countries that have launched national food strategies and in this way approximate or exceed the annual rate of agricultural production of 4 per cent called for in the Substantial New Programme of Action (SNPA).

Annex I

The agricultural sector, 1970-1982 and population growth rate in the African Least Dev loped Countries

1960-1965 and 1975-1980

Country	Labour force in agriculture (% of total) 1982	GDP in agriculture % share in total GDP 1982	Agricultural production: Real growth rate 1970-1980	1980-1981	1981-1982	1982-1983	Food production: Real growth rate 1970-1980	1980-1981	1981-1982	1982-1983	Food production per capat: Real growth rate 1970-1980	1980-1981	1981-1982	1982-1983	Population growth rate (per cent) 1960-1965	1975-1980	1980-1985c/
Benin	45	43	1.8	0.9	0.9	1.7	2.0	-0.9	0.9	2.6	-0.5	-3.7	-1.9	-0.2	1.6	2.6	2.8
Botswana	78	12	-2.5	19.4	7.0	5.4	-2.7	21.1	5.8	6.6	-6.3	17.0	2.2	3.0	2.6	3.8	3.4
Burkina-Faso	80	35	1.3	7.1	-0.8	-0.8	1.0	8.3	0.0	-2.5	-0.4	6.5	-1.7	-4.2	1.7	1.7	2.3
Burundi	82	54	2.1	11.7	-7.3	7.5	2.2	5.8	-3.6	9.7	0.5	3.3	-6.1	2.8	1.9	1.6	2.6
Cape Verde	55	23a/	..	..	..	..	..	..	..	..	..	..	..	..	2.8	1.5	1.4
Central African Republic	86	31	1.8	0.0	5.7	-3.6	2.1	1.9	3.7	-5.3	0.1	-0.4	1.3	-7.4	1.5	2.2	2.3
Chad	82	49	1.1	-0.9	2.8	1.8	1.4	-0.9	1.7	0.0	-0.7	-3.0	-0.5	-2.3	1.7	2.1	2.3
Comoros	63	40	..	..	..	..	..	..	..	..	..	..	..	..	2.3	4.0	3.0
Djibouti	..	6a/	..	..	..	..	..	..	..	..	..	..	..	..	2.3	7.7	3.2
Equatorial Guinea	74	38	..	..	..	..	..	..	..	..	..	..	..	..	1.3	2.0	2.1
Ethiopia	78	45	1.3	0.0	3.6	1.6	1.2	-0.9	10.4	1.6	-1.1	-3.4	7.5	-1.1	2.3	2.5	2.6
Gambia	77	27	-2.5	29.4	21.6	-31.3	-2.5	29.4	21.6	-31.3	-5.4	26.1	18.5	-33.6	2.3	2.8	1.9
Guinea	79	39	0.7	2.9	2.9	-0.9	0.7	2.9	2.9	-0.9	-1.4	0.6	0.5	-3.2	1.7	2.2	2.3
Guinea-Bissau	81	46	0.0	4.5	0.0	-1.1	0.0	4.5	0.0	-1.1	-4.2	1.6	-2.0	-2.7	-0.7	5.2	1.9
Lesotho	82	21	-0.2	3.3	-3.2	3.3	0.2	4.4	-4.3	3.3	-2.1	1.9	-6.6	0.8	2.0	2.4	2.4
Malawi	82	34	4.2	4.2	8.1	3.0	3.8	4.3	5.8	3.1	1.2	1.6	3.1	0.5	2.4	2.6	3.2
Mali	86	26	1.1	5.4	-2.5	1.7	0.7	8.3	-2.6	0.9	-1.4	5.6	-5.0	-1.7	1.9	2.1	2.7
Niger	87	49	2.2	3.6	-1.4	2.8	2.2	3.5	-1.4	2.8	-0.3	0.8	-4.1	-0.1	2.9	2.6	2.8
Rwanda	89	41	3.4	2.4	3.9	4.5	3.2	2.4	4.0	4.6	-0.1	-0.1	0.5	1.0	3.0	3.4	3.4
Sao Tome & Principé	..	38b/	..	..	..	..	..	..	..	..	..	..	..	..	1.5	1.2	2.7
Sierra Leone	64	29	1.0	0.0	10.7	5.3	0.8	0.0	10.8	3.5	-0.7	-1.7	8.9	1.7	1.3	1.6	1.7
Somalia	79	44	0.8	1.8	5.4	-3.4	0.8	1.8	5.4	-3.4	-4.2	-3.5	0.9	-6.8	2.0	8.1	3.5
Sudan	76	34	1.1	13.9	-8.7	7.6	2.6	16.5	-13.4	4.5	-0.4	13.2	-15.8	1.6	2.0	3.1	3.3
Togo	67	29	1.2	-0.9	4.4	0.8	1.3	-0.9	3.5	1.7	-1.0	-3.5	0.6	-1.2	1.4	2.4	2.8
Uganda	80	72	0.0	3.0	8.8	7.2	1.4	4.8	4.5	5.2	-1.5	1.2	1.0	1.6	4.1	3.3	3.5
United Republic of Tanzania	80	43	1.5	2.7	-1.8	5.4	2.6	4.2	2.4	2.4	-0.7	0.7	-1.1	-1.2	2.9	3.5	3.5
-All African LDCs	76	36	1.0	5.4	3.1	1.3	1.1	5.7	2.8	0.2	-1.4	2.8	0.0	-2.5	2.0	3.0	2.2

Source: UNCTAD: The Least Developed Countries 1984 Report.

a/ 1980 b/ 1981 c/ UN World Population Prospects.

Annex II

Food production per caput indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Benin	100	96	104	101	110	111	101	98	95	93	103
Guinea	100	100	100	99	94	88	85	94	94	89	90
Guinea-Bissau	91	100	109	80	85	80	67	83	93	77	89
Sierra Leone	97	102	101	99	102	92	94	93	100	100	84
Togo	99	101	101	94	104	101	102	100	96	91	89

Source: FAO computer printouts.

Annex III

Cereals production per caput indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Benin	113	98	89	100	124	112	94	96	90	87	119
Guinea	101	100	99	95	82	75	62	88	84	75	77
Guinea-Bissau	63	109	128	47	62	52	44	96	130	103	126
Sierra Leone	94	103	103	105	108	83	86	82	96	98	70
Togo	93	100	106	87	122	115	109	98	102	95	95

Source: FAO computer printouts

Annex IV

Roots and tubers production per caput indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Benin	97	89	114	101	119	122	101	94	94	89	94
Guinea	101	100	99	99	98	75	90	88	93	90	89
Guinea-Bissau	115	95	90	114	94	103	98	96	94	92	91
Sierra Leone	105	104	91	91	91	90	93	93	95	97	91
Togo	102	100	98	93	99	97	99	102	90	79	79

Source: F.O computer printouts.

Annex V

Pulses (total) production indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Benin	91	98	111	140	183	174	133	132	137	135	174
Guinea	99	99	101	103	111	111	111	119	119	90	102
Guinea-Bissau	93	93	114	100	107	107	107	107	107	107	107
Sierra Leone	97	99	103	107	112	107	115	115	116	116	116
Togo	91	95	114	112	102	104	107	103	126	158	130

Source: F.O computer printouts.

Annex VI

Production of primary coarse grains (maize, sorghum, millet, barly, oats), 1974-1984

1974-1976 = 100 (Area = 1000 ha Yield = kg/ha Pdn = 1000 MT)

Country	1974/76	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Benin												
A	415	468	400	376	427	558	535	476	548	538	583	603
Y	701	696	715	692	724	738	710	707	646	641	596	785
PDN	291	326	286	260	309	411	380	337	354	345	347	473
Guinea												
A	215	213	215	218	196	198	186	186	202F	202F	187F	197F
Y	603	686	681	638	682	682	649	600	583	594	599	660
PDN	147	146	147	138	134	135	121	111	118F	120F	112F	130F
Guinea-Bissau												
A	43	42F	45F	47F	36F	44F	43F	45F	44F	57	56	65F
Y	543	512	539	577	486	563	558	600	614	684	670	669
PDN	24	22F	24F	27F	18F	25F	24F	27F	27F	39	38	44F
Sierra Leone												
A	26	24F	24F	30	30	30	30	31F	31F	34F	34F	38F
Y	1083	1053	1066	1119	1148	1148	1086	1249	1294	1288	1288	1603
PDN	28	25	25	33	35	35	33	38	40F	43F	43F	60F
Togo												
A	260	254	260	266	279	306F	303	319	322	291	322	331F
Y	925	875	923	974	767	1008	991	919	858	1003	871	900
PDN	240	222	240	259	214	308	301	293	276	292	280	298

Source: FAO computer printouts.

* = Unofficial estimate F = FAO estimate Pdn= Production

Annex VII

Rice (Paddy) production, 1971-1984

(Area = 1000 ha Yield = kg/ha Pdn = 1000 MT)

Country	1974/1976	1971	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
AFRICA												
Y	1788	1793	1800	1771	1712	1730	1768	1800	1748	1803	1834	1713
Benin												
A	8	6	7	10	9	9	8	8	8	8	7	6
Y	1791	1694	1850	1804	2067	824	1256	1217	1041	1130	717	1204
PDN	14	10	14	18	18	8	10	10	9	9	5	8
Guinea												
A	468	464	468	473	473	405	386	430F	410F	410F	400F	405F
Y	900	900	900	900	886	900	900	882	1049	1024	990	1000
PDN	422	417	422	426	418	366	348	291	430	420	396	400
Guinea-Bissau												
A	72	50F	75F	90F	50F	60F	60F	60F	90F	143	90	145
Y	847	700	843	889	600	667	583	500	900	721	944	724
PDN	61	35*	67	80	30*	40F	35F	30*	81*	103	85	105
Sierra Leone												
A	383	370*	380*	400	410	425	400	410	400*	400F	400F	400F
Y	1452	1402	1502	1450	1463	1459	1250	1251	1250	1458	1522	1125
PDN	556	519	571	580	600	620	500	513	500	583*	609	450*
Togo												
A	10	10	10	11	12	20F	20F	16	16	17	14	13
Y	1290	1200	1300	1364	1333	1150	850	898	907	854	1132	790
PDN	13	12	13	15	16	23	17	15	15	15	16	10

Source: FAO computer printouts

* = Unofficial estimate F = FAO estimate Pdn= Production

Annex VII

Rice (Paddy) production, 1971-1984

(Area = 1000 ha Yield = kg/ha Pdn = 1000 MT)

Country	1971/ 1976	1971	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
AFRICA												
Y	1788	1793	1800	1771	1712	1730	1768	1800	1748	1803	1834	1713
Benin												
A	8	6	7	10	9	9	8	8	8	8	7	6
Y	1701	1694	1850	1804	2067	824	1256	1217	1021	1130	717	1204
PDN	14	10	14	18	18	8	10	10	9	9	5	8
Guinea												
A	468	464	468	472	472	406	386	390F	410F	410F	400F	400F
Y	900	900	900	900	836	900	900	832	1040	1024	990	1000
PDN	422	417	422	426	394	366	348	324	426	420	396	400
Guinea-Bissau												
A	72	80F	75F	90F	90F	60F	60F	60F	90F	143	90	145
Y	847	700	845	889	670	667	583	500	900	721	944	724
PDN	61	56*	67	80	60*	40F	35F	30*	81*	103	85	105
Sierra Leone												
A	383	370*	380*	400	410	425	400	410	400*	400F	400F	400F
Y	1452	1402	1502	1450	1463	1459	1250	1251	1250	1458	1522	1125
PDN	556	519	571	580	600	620	500	513	500	583*	609	450*
Togo												
A	10	10	10	11	12	20F	20F	16	16	17	14	13
Y	1290	1200	1300	1364	1333	1150	850	898	907	854	1132	790
PDN	13	12	13	15	16	23	17	15	15	15	16	10

Source: F.O computer printouts

* = Unofficial estimate F = F.O estimate Pdn= Production

Annex VIII

Nominal fish catches by countries, 1974-1983

(metric tons)

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Benin	27,082	25,933	25,504	24,928	24,279	23,965	23,590	23,766	23,519	21,050
Guinea	12,100	13,370F	9,920F	9,120F	10,000F	18,453	18,453R	18,453R	18,453R	18,453R
Guinea-Bissau	1,700	1,659	3,481	3,824	3,740	2,178	3,777	2,669	3,937	2,617
Sierra Leone	67,739	68,597	53,792	52,652	50,080	57,592	49,187	51,000F	53,038	53,038R
Togo	11,150	14,420	11,380	8,314	15,513	8,090	9,134	10,325	14,530	14,556

Source: FAO Yearbook of Fishery Statistics, Vol.56, 1983.

Annex IX

Meat (total) production indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Benin	93	101	104	105	110	113	119	132	134	138	142
Guinea	94	100	106	113	118	125	130	137	143	149	152
Guinea-Bissau	95	97	108	121	138	150	161	170	176	182	185
Sierra Leone	95	101	104	108	113	119	125	131	138	141	137
Togo	98	101	101	100	106	105	109	116	121	125	125

Source: FAO computer printouts.

Annex X

CENTRAL AFRICA:
Food (total) production indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
C.A.R.	100	101	100	103	103	105	108	109	112	110	113
Eq. Guinea	-	-	-	-	-	-	-	-	-	-	-
Sao Tome & Principé	115	94	91	83	90	100	84	89	83	83	97

Source: FAO computer printouts.

Annex XI

Food production per caput indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
C.A.R.	102	101	98	99	97	97	97	96	96	92	92
Eq. Guinea	-	-	-	-	-	-	-	-	-	-	-
Sao Tome & Principé	117	93	90	81	87	95	79	82	75	72	82

Source: FAO computer printouts.

Annex XII

Roots and tubers production indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
C.A.R.	101	99	100	103	106	107	106	108	108	104	107
Eq. Guinea	-	-	-	-	-	-	-	-	-	-	-
Sao Tome & Principé	96	100	104	105	108	109	110	114	118	118	118

Source: FAO computer printouts.

Annex XIII

Pulses (total) production indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
C.A.R.	98	100	102	104	106	107	109	111	113	115	117
Eq. Guinea	-	-	-	-	-	-	-	-	-	-	-
Sao Tome & Principe	-	-	-	-	-	-	-	-	-	-	-

Source: FAO computer printouts.

Annex XIV

Nominal fish catches by countries, 1974-1983

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
C.A.R.	11,883	8,044	10,465	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Equatorial Guinea	4,000R	4,000R	4,000R	4,000R	4,000R	4,000R	2,500	2,500R	2,500R	2,500R
Sao Tome & Principé	600F	377	646	889	1,175	475	417	2,158	2,688	4,050

Source: FAO Yearbook of Fishery Statistics, Vol. 56, 1983

Annex XV

Meat (total) production indices, 1974-1983

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
C.A.R.	98	103	99	107	114	106	118	118	121	121	123
Equatorial Guinea	-	-	-	-	-	-	-	-	-	-	-
Sao Tome & Principe	94	89	117	67	70	70	73	93	99	100	100

Source: FAO computer printouts.

ANNEX XVI

EASTERN AND SOUTHERN AFRICA

Food production per caput, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Botswana	107	91	101	89	70	80	59	71	70	62	61
Burundi	93	103	104	104	107	103	97	99	95	96	86
Comoros	101	100	99	95	94	93	95	87	88	89	86
Djibouti											
Ethiopia	99	102	99	95	104	113	106	102	110	106	90
Lesotho	119	92	89	100	102	88	84	80	74	73	72
Malawi	104	96	101	102	107	96	100	101	103	100	97
Rwanda	93	102	105	106	105	111	108	112	115	115	103
Somalia	99	104	97	91	86	77	76	72	73	67	64
United Republic of Tanzania	90	101	108	107	104	107	103	106	98	96	94
Uganda	98	100	102	97	101	90	88	90	91	92	90

Source: FAO computer Printouts.

Annex XVI

Cereals production per caput indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Botswana	125	63	111	58	25	...	35	42	8	7	2
Burundi	101	101	97	96	122	114	104	131	112	111	79
Comoros	85	109	105	110	106	101	106	102	101	103	103
Djibouti											
Ethiopia	91	109	100	88	111	135	116	106	131	120	86
Lesotho	153	34	63	138	152	112	84	67	45	43	42
Malawi	116	88	96	111	113	85	89	93	101	95	94
Rwanda	92	103	105	109	114	102	107	109	122	139	102
Somalia	82	114	104	105	99	92	90	102	118	92	86
United Republic of Tanzania	77	103	120	129	127	132	132	124	118	104	95
Uganda	88	110	102	89	89	69	58	61	64	77	75

Source: FAO computer printouts.

Annex XVIII

Roots and tubers production per caput indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Botswana	100	100	100	100	100	100	96	93	91	87	83
Burundi	101	99	100	100	94	92	79	81	77	70	71
Comoros	101	101	98	97	95	92	90	88	87	85	84
Djibouti											
Ethiopia	99	103	98	105	108	111	113	115	116	117	85
Lesotho	95	100	100	100	95	115	110	110	105	100	100
Malawi	103	101	97	103	106	110	114	112	111	107	105
Rwanda	94	102	104	104	104	129	116	121	126	135	115
Somalia	100	101	100	95	84	81	78	76	75	75	74
United Republic of Tanzania	86	107	107	96	93	94	97	99	81	84	83
Uganda	103	93	104	101	109	105	110	111	110	107	104

Source: FAO computer printouts.

Annex XIX

Maize production, 1974-1984

1974-1976 = 100 (Area= 1000 ha Yield= kg/ha Pdn= 1000mt)

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Botswana											
Area	70F	40F	80F	65F	45F	21	47	59	24	20	15F
Yield	484	718	783	545	311	107	249	361	519	433	13[illegible]
Pdn	34	29	63	35	14	2	12	21	12	8	2
Burundi											
Area	110F	120F	122F	122F	120F	120F	130F	130*	135F	135F	133F
Yield	987	1,143	1,147	1,148	1,030	1,128	1,077	1,131	1,067	1,096	774
Pdn	109	137	140	140	124	135	140	147	144	148F	103
Comoros											
Area	4F	4F	4F	4F	5F	5	5F	5F	5F	6F	6F
Yield	1,056	1,053	1,050	1,070	1,000	1,000	1,000	1,000	1,000	982	1,071
Pdn	4F	4F	4F	5F	5F	5	5F	5F	5F	6F	6F
Djibouti											
Area											
Yield											
Pdn											
Ethiopia											
Area	749	733	673	849	910	327	735	653	820	1,000F	900F
Yield	1,122	1,871	1,409	1,094	1,508	1,846	1,289	1,338	1,956	1,700	1,417
Pdn	841	1,371	948	929	1,372	1,527	948	1,200	1,603	1,700*	1,275F
Lesotho											
Area	130	108	85	80	102	112	110	120	110	60F	60F
Yield	945	652	579	1,563	1,408	1,112	957	875	755	1,500	1,500
Pdn	125	70	49	126	143	125	106	105	83	90*	40*
Malawi											
Area	1,110	1,000F	1,000*	1,000*	1,100F	1,000F	1,100F	1,100*	1,200F	1,200F	1,136F
Yield	1,153	1,000	1,000	1,314	1,286	1,082	1,059	1,132	1,179	1,142	1,232
Pdn	1,280*	1,000*	1,000*	1,314	1,415	1,082	1,165	1,245	1,415	1,370F	1,400F
Rwanda											
Area	63	63	65	70	67	78	72	69	79	81	70F
Yield	1,018	1,075	1,080	1,102	1,121	1,072	1,185	1,233	1,363	1,345	1,143
Pdn	64	67	71	77	76	83	85	85	108	109	80F
Somalia											
Area	91F	127F	90F	114*	110F	110F	112F	114F	150F	130F	130F
Yield	976	979	974	976	979	984	987	1,380	1,000	923	923
Pdn	89	124	88	111	108	108	111	157	150	120	120F
United Republic of Tanzania											
Area	1,100F	1,100F	1,300*	1,300*	1,300*	1,300F	1,400F	1,350F	1,350*	1,350*	1,250F
Yield	713	1,211	1,164	1,268	1,127	1,231	1,233	1,185	1,147	1,010	905
Pdn	784	1,332	1,513	1,648	1,465	1,600F	1,726	1,600F	1,549	1,363F	1,131F
Uganda											
Area	388	475	526	429	450	272	258	260	280	340F	385F
Yield	1,108	1,199	1,280	1,318	1,320	1,665	1,109	1,315	1,404	1,324	1,299
Pdn	430	570	674	566	594	453	286	342	393	450	500F

Source: FAO computer printouts.

Sorghum Production, 1974-1984

(Area= 1000 ha Yield= kg/ha Pdn= 1000 mt)

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Botswana											
Area	80F	100F	100F	100F	70F	42	130	122	37	35	35F
Yield	904	338	555	330	221	102	223	231	104	150	171
Pdn	72	34	56	33	16	4	29	28	4	5	6
Burundi											
Area	107	116	100	100	137	131	138	171	150F	150F	177F
Yield	1,502	1,112	1,203	1,064	1,464	1,271	1,167	1,423	1,333	1,333	847
Pdn	161	129	120	106	200	167	161	243	200F	200F	150F
Ethiopia											
Area	751	778	747	763	726	1,014	979	844	906	930F	837F
Yield	839	1,126	1,012	987	1,452	1,619	1,441	1,429	1,498	1,247	1,039
Pdn	631	876	756	708	1,055	1,642	1,411	1,209	1,356	1,160	870F
Lesotho											
Area	83	55	44	42	59	51	61	60	48	48F	48F
Yield	1,009	684	555	1,467	1,447	1,375	967	800	542	313	542
Pdn	84	37	25	62	86	69	59	48	26	15	26
Malawi											
Area	120F	120F	120F	130F	150F	120F	130F	130*	130F	135F	134F
Yield	833	833	875	923	933	917	923	1,077	1,077	111	1,097
Pdn	100F	100F	105F	120*	140*	110*	120F	140*	140F	150F	147F
Rwanda											
Area	134	133	138	145	162	147	145	184	177	179	180F
Yield	901	1,087	1,121	1,127	1,129	1,102	1,237	1,049	1,208	1,480	1,111
Pdn	121	144	155	164	183	163	179	193	214	265	200F
Somalia											
Area	190F	260F	330F	290F	282F	280F	281F	413F	470F	470F	470F
Yield	498	500	501	500	500	500	500	501	500	500	500
Pdn	95	130	165	145	141	140	141	207	235	235	235F
U.R. of Tanzania											
Area	310F	450F	550F	700F	700F	700F	740F	700F	700F	660F	650F
Yield	629	678	782	745	644	714	761	714	706	697	692
Pdn	195	305	430	521	451	500F	563	500F	480F	460F	450F
Uganda											
Area	367	311	327	280	286	187	167	170	200	230	230F
Yield	940	1,500	1,193	1,228	1,223	1,690	1,790	1,882	2,000	2,043	2,043
Pdn	345	467	390	344	350	316	299	320	400	470	470F

Source: FAO computer printouts. * Unofficial estimate F= FAO estimate Pdn= Production

ANNEX XXI

Millet production, 197.-1984

(Area= 1000 ha Yield= kg/ha Pdn= 1000 mt)

Country	197.	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Botswana											
Area	10F	10F	10	10	10F	8	14	13	3	6	7F
Yield	400	400	350	300	250	113	159	148	132	69	71
Pdn	4F	4F	4F	3F	3	1	2	2	-	-	1F
Burundi											
Area	32	27	36	48	51	56	45	45	47F	50F	52F
Yield	600	895	821	767	966	1,090	792	854	851	840	673
Pdn	19	25	29	37	49	61	36	39	40F	42F	35F
Ethiopia											
Area	206	378	199	232	238	218	233	227	225	200F	180F
Yield	762	1,001	866	892	834	949	879	871	1,066	963	806
Pdn	157	379	172	207	199	207	205	197	240	193	145F
Rwanda											
Area	3	5	5	5	5	4	4	4	3	3	3F
Yield	509	566	575	602	610	562	439	582	678	712	692
Pdn	2	3	3	3	3	2	2	2	2	2*	2F
U.R. of Tanzania											
Area	180F	220*	200F	350F	440F	450F	450F	450F	450F	400F	350F
Yield	635	647	651	628	726	744	844	778	829	838	814
Pdn	114	142	130	220	319	335	380	350F	373	335F	285F
Uganda											
Area	510	484	498	527	510	313	279	300	330	260	360
Yield	1,159	1,409	1,156	1,096	1,100	1,537	1,645	1,600	1,600	1,667	1,667
Pdn	59	682	576	578	561	481	459	480	528	600	600F

Source: FAO computer printouts.

* Unofficial estimate F= FAO estimate Pdn= production

Rice (paddy) production, 1974-1984

(Area= 1000 ha Yield= kg/ha Pdn= 1000 mt)

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Burundi											
Area	3	3	3	4	4	3F	2	2F	2F	2F	2F
Yield	1,826	1,996	2,359	2,902	2,976	3,000	5,958	5,000	4,500	4,650	4,476
Pdn	6	6	7	12	13	9	11	10	9	9F	9F
Malawi											
Area	42F	40F	45F	45F	47F	45F	43F	42F	42F	42F	42F
Yield	950	842	967	953	1,060	877	849	802	786	768	786
Pdn	40*	34*	44*	43*	50*	39*	36*	34*	33F	33F	33F
Rwanda											
Area	1	1	1	1	1	1	1	2	2	1	1F
Yield	2,289	2,479	2,493	2,644	2,508	2,732	3,313	3,441	3,493	4,566	4,519
Pdn	2	3	3	3	3	3	4	6	6	6	6F
Somalia											
Area	1F	1F	1F	3F	5F	5F	7F	3F	7F	1F	1F
Yield	2,982	3,000	2,923	2,545	2,501	2,528	2,530	2,484	2,857	2,333	2,368
Pdn	2	2	2	8	12	13	17	8	20	3	3F
U.R. of Tanzania											
Area	163F	204F	267F	243F	258F	277F	245F	280F	270F	270F	270F
Yield	1,398	1,401	1,399	1,505	1,501	1,498	1,481	1,510	1,404	1,481	1,481
Pdn	228	286	373	366	387	415	363	423	379	400	400F
Uganda											
Area	17	18	24	20	24	12	11	12	15	20	20F
Yield	867	894	1,188	1,071	1,066	1,250	1,545	1,250	1,200	1,250	1,250
Pdn	15	16	29	21	26	15	17	15	18	25	25F

Source: FAO computer printouts. * Unofficial estimate F= FAO estimate Pdn= production

Annex XXIII

SAHEL

Food (total)production indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Burkina-Faso	97	105	98	102	108	114	109	117	117	116	110
Cape Verde	94	98	109	102	111	102	144	103	99	97	105
Chad	96	100	104	108	114	117	116	117	116	119	107
Gambia	100	104	96	74	94	65	68	90	108	77	82
Mali	92	103	105	105	118	114	118	130	135	128	123
Niger	95	91	114	128	136	142	138	146	146	148	130

Source: FAO computer printouts.

Annex XXIV

Food production per caput indices, 1974-1984

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Burkina-Faso	99	105	96	98	102	105	98	103	101	98	90
Cape Verde	96	98	106	99	106	96	134	95	89	81	93
Chad	98	100	102	104	107	107	105	103	100	100	88
Gambia	102	104	94	71	88	60	61	79	94	65	68
Mali	94	103	103	101	111	105	106	114	115	106	99
Niger	97	91	112	122	127	129	130	125	121	120	103

Source: FAO compter printouts.

Annex XXV

Cereals production per caput indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Burkina-Faso	106	110	84	92	96	96	83	99	91	80	70
Cape Verde	27	182	88	...	39	...	30	...	...	...	...
Chad	103	99	99	99	90	87	92	100	101	98	95
Gambia	110	110	80	53	95	69	90	107	118	54	68
Mali	97	108	95	104	79	70	88	93	75	75	65
Niger	106	74	120	130	129	135	143	132	129	130	83

Source: FAO computer printouts.

Annex XXVII

Agric (total) production indices, 1974-1984

1974-1976 = 100

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Burkina-Faso	93	105	102	104	111	124	120	118	121	126	125
Cape Verde	106	99	95	93	99	100	105	109	108	108	111
Chad	91	102	108	109	112	122	124	119	113	104	95
Gambia	97	100	103	102	104	107	110	112	114	117	112
Mali	90	102	109	113	129	136	148	156	162	155	150
Niger	95	103	102	147	156	152	164	168	166	171	178

Source: FAO computer printouts.

Annex XXVIII

Nominal fish catches, 1974-1983
(Metric Tons)

Country	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983
Burkina-Faso	5000	5000	6000	6000	7000	7000	6500	7500	7000	7000
Cape Verde	3428	3902	2065	8331	8331F	746F	8837	11105	10381	12205
Chad	110000F	110000F	110000F	110000F	110000F	115000F	115000F	115000F	115000F	110000F
Gambia	10795	10795F	10795F	16262	14451	11238	14054	12791	10020	9598
Mali	90000F	100000F	95000F	90000F	85000F	74000F	80000F	56000F	54000F	33000F
Niger	15050	9142	4715	7372	9783	8934	8092	8208	6840	6840R

Source: FAO Yearbook of Fishery Statistics, Vol. 56, 1983.

F= FAO estimate
R= Repetition of data previously reported by the country.

Annex XXIX

Food (total) rice (paddy), cereals, maize, millet, sorghum, roots and tubers production in the SUDAN, 1974-1984

(Area = 1000 ha Yield = kg/ha Pdn = 1000 mt)

Food item	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
Food (indices)	96	101	103	107	108	112	109	127	108	109	106
Rice (paddy)											
Area	6	7	9	12	8	4F	4F	4F	4F	4F	4F
Yield	1,165	992	1,196	1,105	1,190	1,750	1,750	1,750	1,750	1,750	1,750
Pdn	7	7	11	13	10	7F	7F	7F	7F	7F	7F
Cereals (total)											
indices	87	102	111	108	116	128	111	167	97	90	75
Cereals per caput indices	90	102	108	102	106	113	98	140	79	71	58
Maize											
Area	83	63	88	63	58	61	60F	61F	65F	65F	65F
Yield	576	671	601	671	719	739	750	738	769	769	769
Pdn	48	42	53	42	42	45	45*	45F	50F	50F	50F
Millet											
Area	1,109	1,111	1,055	1,165	1,238	1,293	1,091	1,100	999	1,100F	1,100F
Yield	242	400	382	406	397	425	450	521	341	285	245
Pdn	268	444	403	473	488	550	491	573	341	314	270
Sorghum											
Area	2,187	2,463	2,595	2,641	2,798	2,667	2,922	3,901	3,583	3,500F	3,500F
Yield	743	708	781	682	721	903	708	857	541	520	414
Pdn	1,625	1,744	2,026	1,800	2,017	2,408	2,068	3,345	1,938	1,819	1,450
Primary coarse grains											
Area	3,379	3,662	3,713	3,864	4,095	4,019	4,074	5,066	4,647	4,665	4,665
Yield	574	612	666	599	622	747	639	783	501	468	379
Pdn	1,941	2,241	2,471	2,315	2,550	3,003	2,604	3,968	2,329	2,183	1,770

Source: FAO computer printouts. F= FAO estimate * Unofficial estimate Pdn= Production